The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 654.---Vol. XVIII. LONDON, SATURDAY, MARCH 4, 1848. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

HILL *v.* VIGERS.

IN RE POLBEROU,
OTHERWISE SAINT AGNES CONSOLIDATED MINES.

NOTICE IS HEREBY GIVEN, that the SALE of the ENGINES, MACHINERY, MATERIALS, and EFFECTS upon and belonging to the above-mentioned MINES, is POSTPONED until the month of APRIL next.

HODGE & HOCKIN,
For GRYLLS & HILL, Solicitors, Helston.

Dated Registrar's Office, Truro, March 1, 1848.

STEAM-ENGINES ON SALE.

No. 1. A Second-hand double power CONDENSING MARINE ENGINE, with cast-iron framing and side beams; cylinder 31 inches diameter, 3 feet stroke; air-pump, lined with brass, no boiler, 47-horse power, with 7 lbs. pressure on the square inch, and very suitable for pumping and winding in a colliery, lead mine, or to drive any kind of mill-work.

2. A double power CONDENSING MARINE ENGINE, quite new, but unfinished, with cast-iron framing and side beams; cylinder 43 inches diameter, 3½ feet stroke, 91-horse power, with 7 lbs. pressure on the square inch; no boiler, and suitable for the same purposes as No. 1.

3. A double power CONDENSING LAND BEAM WINDING ENGINE, cylinder 42 inches diameter, 4½ feet stroke, hand gear, with button valves, parallel motion, fly-wheel, waggon boiler, with all its fittings, door, grate, dead plate, &c.; two large cast-iron bell cranks and pedestals, with strong wrought-iron connecting-rods, for pumping water from two lifts of pumps, 100 yards deep; two rope wheels, suited for flat chains, apparatus to throw in and out of gear, pit-head pulleys, &c.; 23-horse power, with 7 lbs. pressure on the square inch, and suitable for the same purposes as No. 1.

4. A new direct action NON-CONDENSING ENGINE, double power, suitable for a corn-mill, or winding in a coal or lead mine, with improved spring packing for piston; ditto ditto, for nozzle valves; cylinder 15 inches diameter, 3½ feet stroke, 28-horse power, with 30 lbs. pressure on the square inch—no boiler.

5. A double power NON-CONDENSING LAND BEAM ENGINE, cylinder 20½ inches diameter, 4 feet stroke, slide valve, parallel motion, no boiler, and quite new; 52-horse power, with 30 lbs. pressure on the square inch, and suitable for the same purposes as No. 1.

6. A double power NON-CONDENSING BEAM WINDING ENGINE, cylinder 15½ inches diameter, 3½ feet stroke, with a cast-iron portable frame, slide valve, hand gear, parallel motion, flat-rope wheel, spur and pinion wheels for the same; 29-horse power, with 30 lbs. pressure on the square inch, no boiler, and suitable for the same purposes as No. 1.

7. A second-hand PUMPING ENGINE, with cylinder 48 inches diameter, 7 feet stroke in the house, and the same in the pit, with air-pump condenser, hand gear, cistern, &c., pumping three lifts of pumps 100 yards, working barrels, 14 inches diameter; no boiler, 113-horse power, with 7 lbs. pressure on the square inch.

8. A new direct action NON-CONDENSING DOUBLE POWER ENGINE, 7-horse power, with a pressure of 30 lbs. on the square inch. This engine takes very little room.

One pair of MARINE BOILERS, newly repaired, suitable for a pair of 45 to 50-horse power engines.

New BOILERS, of any shape, can be made at a short notice, to suit any of the above engines.—For further information, apply to EYTON & CO.,
Mostyn Foundry, near Holywell, Flintshire.

VALUABLE PUMPING AND WINDING ENGINES FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, at WHEAL VOR MINE, in the parish of BREAGE, CORNWALL—

1 80-inch DRAUGHT ENGINE, 10-feet stroke in cylinder, and 8 feet in shaft, main beam and caps, top nozzle, spring piston and rod—all new this year; with four boilers, of 12 tons each, in excellent repair.
1 80-inch DITTO, 10 feet stroke in cylinder, 7½ feet in shaft, cylinder, piston, bottom and cover, nearly new, with two boilers, of 12 tons each, and three boilers, of 10 tons each, all lately thoroughly repaired.
1 49-inch DITTO, 9 feet stroke in cylinder, and 7 feet in shaft, without boilers.
1 20-inch WINDING ENGINE, 5 feet stroke, with two boilers, of 4 and 6 tons, and vertical cage, all in complete repair—the boilers and some other parts nearly new.
1 18-inch DITTO, 4 ft. stroke, with one boiler, of 5 tons, and horizontal cage, complete.
Several TONS of straight and turned STEAM-PIPES.
12-head CAST-IRON STAMPS AXLES, with bearings, oak frames, &c., complete.
A powerful WEIGHING MACHINE, nearly new, comprising every requisite.
An immense number of PUMPS, matching-pieces and windbores, 12 to 17-inch bore, with working barrels, doorpieces, H-pieces, cases, with stuffing-boxes and glands to match, from 11 to 19 inches bore, and plunger-poles, from 12 to 19 diameter.
Faggotted rod and cap plates, 6, 7, and 8 inches wide, staples and glands, eyerunners, caps, saddles, troughs and gudgeons for balance and other bobs.

Application to be made to Capt. R. Blight, jun., on the mine.

Dated Nov. 29, 1847.

N.B.—The above are of easy transit to Hayle wharfs, and from thence on ship-board, if required.

BEAM TIN MINE, in the parishes of ST. AUSTELL and ROCHE.—In consequence of the inability of some large shareholders to advance the requisite capital, this VALUABLE PROPERTY is OFFERED FOR SALE, in its entire state, BY TENDER.

For its extent, BEAM MINE has been one of the most PROFITABLE in CORNWALL. Its tin is of the richest quality, and is known to be in great abundance below the present levels—the produce of 1847, from the upper levels alone, having been nearly £3000.—The machinery being most efficient, and all the shafts and levels newly timbered, a small comparative outlay will suffice to open the rich tin ground; the investment is, therefore, most desirable; and, should the purchaser wish it, several of the present adventurers will readily unite with him in working the mine effectually.

Tenders for the entire mine and machinery (pre-paid) will be received by Messrs. Coode and Ghilson, until the 13th of March next.

For viewing the mine, apply to the agents thereon; and for particulars, to Mr. Robert Knight, Luxulyan; or to Mr. R. Greenwood, purser.

N.B.—The highest tender will not be necessarily accepted.

Truro, Feb. 23, 1848.

BIDDLE'S PATENT ÆOLIAN ENGINE—The BEST, CHEAPEST, and SAFEST MODE of OBTAINING WIND-POWER, ever yet employed, applicable in almost all situations, and to a great variety of useful purposes—such as pumping, grinding, and milling of every description, at a tenth part of the usual cost. It is self-regulating, and, where used for raising water only, it might be left day and night without attendance. There is no railway, estate, farm, nor mill, but might advantageously adopt it.—Specimen at Mr. Oliver's Saw-Mills, Surrey Canal, where all particulars may be obtained.—Contracts made, &c.

LAMBERT'S PATENT FLEXIBLE DIAPHRAGM WATER VALVES, or TAPS.—A certain PREVENTATIVE of LEAKAGE, superseding the use of the metal plug-tap, which is so continually out of order. They are more durable, less expensive, and being nearly frictionless, are opened and closed with perfect ease. They have been tested under various pressures, and have given the greatest satisfaction.—MANUFACTURED ONLY by the Patentees,

THOMAS LAMBERT & SON, Brass and Cock Founders,
30, New-cut, Blackfriars-road.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS,
TUBES FOR STEAM, GAS, AND OTHER PURPOSES,
ALL SORTS OF GAS FITTINGS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY,
43, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,

MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and are warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.
WORKS—SMETHWICK, STAFFORDSHIRE.
LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN

J. MURDOCH (successor and late assistant to Mr. Hebert)
Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain
REFERENCE TO A CLASSIFIED LIST OF PATENTS,
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

THE PATENT OFFICE AND DESIGNS REGISTRY,
No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

FOURDRINIER'S PATENT SAFETY APPARATUS, for THE PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS.

By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks: in this case the apparatus is *self-acting*.

2. From either the men, or load, being drawn over the pulley: in this case, also, the apparatus is *self-acting*.

3. From the fearful consequences to men or load of a "whirl," or run: in this case the result is equally *certain*.

A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSLEM, in the STAFFORDSHIRE POTTERIES.

To inspect the apparatus, or to obtain any further information, application may be made to Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or to Mr. Joseph Fourdrinier, 68, Arlington-street, Camden Town, London—who are prepared to GRANT LICENSES for the USE of the PATENT.

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *deflective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,
Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS.
DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847.

EAST WHEAL FRIENDSHIP MINING COMPANY,
ADJOINING OLD WHEAL FRIENDSHIP.

TO BE WORKED ON THE "COST-BOOK" PRINCIPLE.

REPORT OF J. H. HITCHINS, ESQ., OF THE DEVON GREAT CONSOLS.

In viewing the sett generally, I have only to remark, that I consider it one possessing advantages of more than ordinary character; and, as a mining investment, as good as any can be. The lode at present in the adit end, now driving east of the River Tavy, being the large masterly one of Wheal Friendship Mines, which has proved so profitable to the adventurers—from 4 to 5 feet wide, intermixed throughout with gossan, mundic, copper, peach, prian, and all the other characteristics comprised in the term "kindly."

Application for the remaining shares, or further particulars, apply at the office of the company, 48, Threadneedle-street; or of Mr. James Lane, 75, Old Broad-street.

DYFNGWM LEAD MINE.—At an Adjourned Meeting of parties interested in the Dyfngwm Lead Mine, held on the 28th Feb., 1848, at the London Tavern, W. W. TAYLOR, Esq., in the chair,

The minutes of the proceedings of the last meeting, held on the 24th inst., were read; as also the report, since received, from the manager of the Rhoswiddol Lead Mines—whereupon the following resolutions were carried unanimously:—

That the offer of the present proprietors to transfer to trustees the lease of the mines, together with the gear, machinery, &c., belonging thereto, upon the following terms—viz.: That the extended company shall consist of 3000 adventures, or shares, of the value of £10 each, of which 2500 (to be considered as paid up in full) shall be appropriated to the present proprietors for the purchase of the lease, machinery, gear, &c., and the remaining 500 adventures, or shares, to be immediately issued upon the following conditions:—£1 per adventure, or share, to be paid on the appropriation thereof, and for the purpose of extending the working of the mines. The remaining £9 to be paid by monthly instalments of 10s. per adventure, or share, until the whole shall have been paid up; the proceeds of these 500 shares to be expended upon the mines, pursuant to the plan proposed in the report, now read and approved, with such alterations as may from time to time appear advisable to the adventurers—the mines being worked upon the "Cost-book" Principle.

That an early meeting of the adventurers be called, when the rules and regulations for managing the concern, upon the Cost-book System, will be considered and determined upon. W. T. TAYLOR, Chairman.

Resolved,—That the cordial thanks of the meeting be given to the chairman, for his conduct in the chair, and the zeal manifested by him in promoting the objects of the adventurers. G. HADLEY, Purser.

37, Royal Exchange, Feb. 29, 1848.

SILVER VALLEY MINING COMPANY.—At a Special General Meeting of shareholders in the above company, held at the offices of the company, 44, Finsbury-square, on Friday, the 3d day of March, 1848, it was

Resolved,—That it is the opinion of the shareholders now present, with reference to the reports of the agents of this company, and the circumstances mentioned at this meeting, that the further prosecution of these mines be discontinued, and that this company be dissolved, and that the directors be authorised and empowered to sell the setts, machinery, ores, and effects, belonging to this company, by public sale, or private contract.—Carried unanimously.

Resolved,—That the thanks of the shareholders be presented to the chairman and directors, for their careful and able management of the company's affairs.—Carried unanimously.

SNYDER'S PATENT LEATHER COMPANY.
(Provisionally Registered, pursuant to the Act 7 and 8 Vic., cap. 110.)

Capital £60,000, in 12,000 shares, of £5 each.—Deposit 10s. per share.—No call to exceed 10s. per share, nor at intervals of less than three months.

CHAIRMAN.
JOHN GARDNER, Esq., M.D., 61, Mortimer-street, Cavendish-square.

PROVISIONAL DIRECTORS.
G. W. BLANCH, Esq., 3, Albion-place, Blackfriars-road.
H. ENGLISH, Esq., 25, Fleet-street.
W. PEARSE, Esq., High-street, Exeter.
THOMAS PORTER, Esq., City-terrace, City-road.
W. SHEARMAN, Esq., 12, Green-street, Ardwick, Manchester.
JOSEPH SMITH, Esq., Parkfield, Rusholme, Manchester.
W. STAGG, Esq., Green-park, Manchester.
J. TRUSCOTT, Esq., Hemmingford Villas West, Barnsbury-park, Islington.
D. L. WILLIAMS, Esq., 6, Edwards-square, Kensington.
W. M. WILLIAMS, Esq., 17, Wilmot-street, Brunswick-square.
BANKERS—The Commercial Bank of London, Lothbury.
SOLICITOR—E. Moss, Esq.—SECRETARY—Mr. E. W. Fenton.

OFFICES—TEMPLE CHAMBERS, FLEET-STREET.

This company has been formed to carry into effect an improvement in the art of tanning, by which leather is rendered not only superior in quality, but at a lower price, and more uniform in texture, than by any process hitherto known.

A patent having been granted to Mr. Snyder for his improvements in tanning, the rights of the patentee have been secured, on advantageous terms, as also his services in carrying out the operations of the company.

Prospectuses, with every information, will be afforded on application to E. Moss, Esq., solicitor, 4, Queen-street, Cheapside; or to the secretary, at the offices of the company, to whom applications for shares are to be addressed.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

THE PATENT SAFETY FUSE,
FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its peculiarness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

TO ENGINEERS.—WANTED, a FOREMAN, in a STEAM-ENGINE MANUFACTORY, who is fully capable of superintending the work of Steam Machinery in all its departments, and directing other works in the establishment.—Application to "A. B.," Post-office, Plymouth, with testimonials of services from their last place of employment, will have immediate attention.

Dated March 1, 1848.

SOUTH WALES.—An AGENT, residing in one of the principal seaports in South Wales, having extensive connections amongst the iron-masters and coal proprietors of the district, and who has a portion of his time at liberty, would be glad to treat with a respectable house requiring an AGENCY—would not object to undertake the office of secretary to a public company, or other similar duties: unexceptionable references will be given.—Apply by letter (post-paid), "D. M. S.," Box T 4, Post-office, Liverpool.

PITWOOD FOR SALE.—A LARGE QUANTITY of very superior SCOTCH FIR PIT TIMBER FOR SALE, in 6 feet lengths, which will be delivered at any of the ports in the Bristol Channel, or in the north of England. Apply to Mr. J. E. Holloway, Christchurch, Hants.

FOR SALE—A THIRD PART in one of the most promising MINES in WALES—situated within a mile of water carriage, and advantageously located for the working by water-power. The lodes have been partially worked, yielding large returns of lead ore, and are laid open to a great extent—presenting the most favourable appearances, with large quantities of barytes, from which immediate returns may be made.—For price and particulars, address "X.," care of Mr. Ward, accountant, 26, Nicholas-lane, City.

PUMPING-ENGINE WANTED.—A SECOND-HAND CONDENSING ENGINE, of recent erection, and in the best order, of about 60-inch cylinder, and 8-feet stroke; also, about FORTY FATHOMS 18-inch PUMPS.

Full particulars of maker's name, where situate, and price, which must be very low, to be addressed to "A. Z.," at Mr. Syrett's, 72, Old Broad-street, London.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.
Price—£12 to £16; with boiler, £22 per horse.

LAND DRAINAGE.—Mr. W. HUGHES, Civil Engineer, begs to announce, that he undertakes the INSPECTION of ESTATES to be DRAINED, the SETTING OUT of DRAINS, the RECLAMATION of LAND, and the GENERAL SUPERINTENDENCE of WORK, at a FIXED CHARGE PER ACRE, according to the extent of land.—Full particulars may be had on application to Mr. W. Hughes, C.E., at the office of the *Mining Journal*, 26, Fleet-street, London.

MR. R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

JAMES LANE, MINING SHARE DEALER,
75, *OLD BROAD-STREET, LONDON.*

WM. KING & CO., MINING AND GENERAL AGENTS, beg to announce, that they ACCEPT AGENCIES for the SALE of MINERAL SUBSTANCES, and their MANUFACTURED PRODUCTS; Apparatus, Machinery, &c., used in mines, manufactories, agriculture, and in the arts; and that they are now prepared to execute orders for Coke, Tyne Fire-clay, Fire-bricks, and the celebrated Wideopen Firestone.—Newcastle-on-Tyne, 30, Collingwood-street.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

BRITISH MINING OFFICES—NOTICE.—The BUSINESS of these OFFICES will henceforth BE CONDUCTED at No. 25, FLEET-STREET, LONDON, and No. 4, STAMP-OFFICE BUILDINGS, MANCHESTER, to either of which offices communications are requested to be addressed. The correspondence and reports, with the accounts, of the respective companies may be inspected at all times, on application.

WILLIAM SHEARMAN.
British Mining Offices, Feb. 17, 1848. JAMES TRUSCOTT.

MONEY.—MESSRS. KILLICK & CO. (late WINSTANLEY, KILLICK, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms; they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.

6, Bank Chambers, opposite the Bank of England.

BANWEN IRON COMPANY.—Notice is hereby given, that a SPECIAL MEETING of the shareholders of this company will be HELD at their offices, 23, Threadneedle-street, London, on Saturday, the 11th day of March next, at Twelve for One o'clock precisely, for the purpose of taking into consideration and confirming the proposition made at the last half-yearly ordinary general meeting for raising the last two calls on the new shares, then agreed to be taken by way of debenture.

By order, S. P. HARRIS, Secretary.
23, Threadneedle-street, Feb. 29, 1848.

NISTER DALE IRON COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors of shares in this company will be HELD at the office of the company, 10, Old Jewry Chambers, in the city of London, on Thursday, the 9th day of March next, at One o'clock precisely.

February 19, 1843. F. W. EMERSON, Clerk.

NISTER DALE IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors of shares in this company will be HELD at the office of the company, 10, Old Jewry Chambers, in the city of London, on Thursday, the 9th day of March next, at Two o'clock in the afternoon precisely, for the purpose of sanctioning and adopting the resolutions passed at a meeting of the shareholders, held on the 12th day of January last; and also for the purpose of considering the most advisable mode for carrying into effect the objects of the said resolutions, and for raising such further sum (if any) as may be required for discharging the remaining liabilities of the company, and to determine whether any and what greater rate of interest than the ordinary rate shall be paid for such advances; and also to consider and adopt the best means of protecting and indemnifying those shareholders who have advanced, or become security for, sums of money, for the purposes of the said resolutions, beyond their fair rateable proportions. F. W. EMERSON, Clerk.

PATENT GALVANISED IRON COMPANY—TRADING under the firm of "MALINS & RAWLINSONS."

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, on Tuesday, the 7th day of March next, at One o'clock precisely, and is specially called for the purpose of approving or disapproving of the Bills now before the House of Commons, for obtaining Acts of Parliament for the benefit of the company.

By order, S. VINCENT, Secretary.
3, Mansion-house-place, London, Feb. 24, 1848.

SWANSEA DOCK COMPANY.—The directors of the SWANSEA DOCK COMPANY, appointed by the Act of Parliament, and confirmed as such by the special general meeting of the shareholders, held in London on the 20th of October, 1847, hereby give Notice, that the CALL of THREE POUNDS on each share of the stock of this company, advertised in the Swansea papers, is not authorised by them, and is ILLEGAL, NULL, and VOID; and shareholders paying the same, will do so at their own risk and loss.

The directors of this company further give Notice, that they continue in office as such under the Special Act of Parliament constituting the Company, and the Company's Clauses Consolidation Act; and, further, that had the whole of the shares of the company been taken up, as contemplated, a call to the extent of only £1 per share would have been required to meet the present necessary purposes of the company.

By order, A. C. HOWDEN, Secretary.
Office of the Swansea Dock Company, 3, Lothbury, London, Feb. 15, 1848.

WICKLOW COPPER MINE COMPANY.—The DIVIDEND of TEN POUNDS PER CENT., declared for the past half-year, will be PAYABLE on and after the 1st day of March inst., at the banking-house of Messrs. Puget, Bainbridge, and Co., St. Paul's Churchyard; and in Dublin at the office of the company, Leinster Chambers, 43, Dame-street.

TO MINE AGENTS, MINE SURVEYORS, &c.—
W. WILTON,
MATHEMATICAL, PHILOSOPHICAL, AND OPTICAL INSTRUMENT MAKER,
ST. DAY, CORNWALL,

Begs to call the attention of MINE AGENTS and SURVEYORS to his MINER'S THEODOLITE, and other IMPROVED INSTRUMENTS, adapted to MINE SURVEYING; and to assure them, that, from many years' constant application of his energies in one of the most active mining districts to this particular branch of mathematical instrument making, he flatters himself he is able to furnish instruments, equal in point of accuracy and workmanship, and superior as regards adaptation to the wants of the miner, to those supplied by almost any other house.

*** A descriptive price list sent free per post, on application.

SIR JAMES MURRAY'S FLUID MAGNESIA.—Prepared under the immediate care of the inventor, and established for upwards of 30 years.—This elegant preparation is recommended in all cases of bile, acidities, indigestion, gout and gravel, as the most safe, easy, and effectual form in which magnesia may—and, indeed, the only one in which it ought—to be exhibited, possessing all the properties of the magnesia now in general use, without being liable, like it, to form dangerous concretions in the bowels, it effectually cures HEARTBURN without injuring the coats of the stomach, as soda, potass, and their carbonates are known to do; it prevents the food of infants turning sour; in all cases it acts as a pleasing aperient, and is peculiarly adapted to females. It has long been known that the most serious consequences have frequently resulted from the use of solid magnesia, which has been proved by Mr. Brande and many other eminent chemists, to form concretions in the bowels, endangering, and, in some instances, destroying life.—Sir HUMPHREY DAVY testified that this solution forms soluble combinations with uric acid salts in cases of gout and gravel—thereby counteracting their injurious tendency, when other alkalies, and even magnesia itself, had failed.

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Letter from J. MURRAY, Esq., Lecturer on Chemistry, F.S.A., F.L.S.:—

"DEAR SIR JAMES,—Many years have elapsed since you first showed me, in your laboratories, your super-carbonate, or soluble magnesia, and demonstrated experimentally the remarkable quantity of pure magnesia held in transparent solution. It was then new to me, as it was to the chemical world, and I speak advisedly, as a practical chemist. I believe its medical value cannot be too highly estimated; and I am satisfied that the public is under an infinite debt of gratitude to you for those invaluable researches, which have been the means of its introduction. Not to mention its more obvious healing virtues, I believe it to be almost, if not altogether, a specific for lithic acid concretions, when used in the pure condensed solution invented by you.

'Believe me to be your's, faithfully, JOHN MURRAY, F.S.A.

"To Sir James Murray, Dublin. Portland-place, Hull, Aug. 30, 1839."

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"To Sir J. Murray. Tuthill's Hotel, Dawson-street, Dublin, Feb. 19, 1839.

From Dr. KENNEDY, Master of the Lying-in Hospital, Dublin:—

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PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—PART THE FOURTH treats of Perry's Preventative Lotion, by the use of which the dangers of infection are obviated. Its action is simple but sure; it combines with the virus chemically, and destroys its power on the system.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

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Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Chester and Holyhead Railway—offices, at One.
Kent Water-Works—offices, at Twelve.
TUESDAY.....Thames Tunnel Company—Radley's Hotel, Blackfriars, at One.
United General Gas-Light Company—offices, at One.
General Reversionary and Investment Company—offices, at One.
Ratcliff Gas-Light and Coke Company—offices, at Two.
Patent Galvanised Iron Company—London Tavern, at One.
Law Clerks and General Provident Investment Assurance—Crown and Anchor, Strand, at Eight.
WEDNESDAY...Chester and Holyhead Railway—offices, at One.
European Life Assurance Company—offices, at Two,
British Colonial Bank and Loan Company—offices, at One.
THURSDAY.....New Brunswick and Nova Scotia Land Co.—offices, at Twelve for One.
Chelsea Water-Works Company—offices, at One.
Nister Dale Iron Company—offices, at One.
West London Railway—London Tavern, at One.
FRIDAY.....Limerick Water-Works Company—offices, at Three.
National Life Assurance Company—offices, at Twelve.
SATURDAY.....Banwen Iron Company—offices, at Twelve for One.

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

BRISTOL AND EXETER RAILWAY.

The half-yearly meeting of shareholders was held at the White Lion Hotel, Bristol, on Thursday last, the 2d inst.—J. W. BULLER, Esq., in the chair.

After the usual preliminaries, the SECRETARY (J. B. Badham, Esq.,) read the report of the directors, which was, in substance, as follows:—The amount of rent and share of toll stated by the Great Western Railway Company to be due to this company, for the half-year ended on the 13th December, 1847, is as follows—viz: Half-year's fixed rent, from June 14 to Dec. 13, 1847, 35,928*l.* 10s.; tollage on 361,832 passengers, conveyed 11,059,229 miles, at ¼d. per mile, 11,520*l.* 0s. 7d.; tollage on goods, 68,942 tons, conveyed 2,572,180 miles, at ¼d. per mile, 2679*l.* 7s. 1d.; total 50,177*l.* 17s. 8d.—The increase over the corresponding half of the preceding year is 494*l.* 15s. 5d., arising from 416,501 additional miles on passengers, and 58,480 on goods. The clear disposable balance of the revenue account is 28,063*l.* 9s. 2d., which allows of the continuance of the dividend of 4½ per cent. per annum on 75*l.* per whole share paid-up, with a surplus of 2750*l.* 19s. 2d. The directors recommend a dividend of 1*l.* 13s. 9d. per 100*l.* share, free of income tax, for the half-year ended Dec. 31, 1847, payable in the month of April. The interest on third shares, and on anticipated calls, to be remitted at the same time. Mr. J. H. Wanklyn having resigned, Lord Courtenay has been elected chairman in his stead. The four directors who now retire by rotation are Messrs. W. Watson, W. Browne, J. Stone, and Lord Courtenay. Lord Courtenay and Mr. T. Seccomb, one of the auditors, offer themselves for re-election. The Tiverton branch will be ready for public traffic in the course of the present month. The Commissioners of Railways, in conformity with the provisions of the Taw Vale Railway Extension Act of Incorporation, have determined that that line shall be constructed on the broad gauge. This just and reasonable decision necessarily affects the short line from Barnstaple to Fremington Pill, the proposed branches to Bideford and South Molton, and more especially the Exeter and Crediton Railway.

The Exeter and Crediton, though agreed to be leased to this company, and accordingly laid down on the broad gauge, ready to open for public traffic in the early part of 1847, though in immediate communication with 250 miles of broad gauge lines, and nearly 100 miles distant from any available narrow gauge railway, has very recently been changed from the broad gauge to the narrow. The two bills for the Taunton and Castle Cary, and the Blendon, Wells, Glastonbury, and Street branches, which was suspended from the last session of Parliament, are reintroduced, and have passed the Standing Orders. Application has been made to the Commissioners of Railways, for an addition of two years to the period allowed by the Acts of Parliament for constructing the Yeovil and Crewkerne branches. On the 11th of February, the directors submitted their views of the course to be pursued at the termination of the lease of the Bristol and Exeter line on the 1st of May, 1849. They have given to this subject their most careful consideration; and while they felt it to be their duty, in accordance with the wishes expressed by some of the proprietors, to endeavour to obtain the option of an alternative, in a temporary extension of the engagement with the Great Western Company, they could not in justice to the permanent interests of the proprietors, recommend that the terms proposed be accepted. From the tabular statement received from the lessees, of the gross earnings upon the Bristol and Exeter line, it appears that the amounts paid to this company for rent and toll, since the opening to Exeter in 1844, average about 50 per cent. of the total receipts. A continuation of that statement has since been received, which shows that they are 108,399*l.* 15s. 1d. for the half-year ending on the 31st December, 1847. The increase in the number of passengers, beyond the number conveyed in the last half of the year 1846, is 36,379, or more than 11 per cent. The answers received by the chairman and deputy-chairman to their circular, leave no doubt of the wish of a large majority of the proprietors to adopt the recommendation of the board, to work the line independently, and to issue 20,000 preferential fifth shares, with a guaranteed interest of 5 per cent. in perpetuity. The balance in the hands of the bankers on the 31st December, 1847, was 50,332*l.* 16s. 11d.—The report was adopted *nem. con.*, as were all the resolutions recommended in it.—Thanks were then voted to the chairman and directors, and the meeting broke up.

CALEDONIAN RAILWAY COMPANY.

The half-yearly meeting of shareholders in this company was held at Edinburgh, yesterday week—J. H. JOHNSTONE, Esq., in the chair.

The report stated that a portion of the line between Carlisle and Beattock, 40 miles, was opened on the 10th of September last, and the remainder, to Edinburgh and Glasgow, on the 15th inst., in the accomplishment of which the directors had many formidable difficulties to encounter. That the opening of the 113 miles of new railway, and the alteration and improvement of the Wishaw and Coltness and Garnkirk Railways, in all 134 miles of railway, had been effected in the space of 2½ years from the passing of the Act. The Castle Cary branch, 10 miles in length, will be ready for opening on the 1st of May. The directors intend to use every exertion to expedite the opening of the Clydesdale Junction Railway, which will give a direct communication with the Glasgow Harbour, Paisley, and Greenock. They propose to proceed with the execution of the remaining works by degrees. They regret that a considerable degree of backwardness had been shown in responding to the calls, which it was found necessary to make. To meet the increasing demands in consequence of expenditure already incurred and in progress, the directors announce a further call of 5*l.* per share on the 25*l.* shares, in equal instalments on the 31st of March and 1st of July, upon which 3*l.* 15s. has already been paid. Until the present works in progress shall be completed, it is not the intention of the directors to enter into any new contracts, and they have made application to the commissioners for an extension of time. The directors conclude by expressing their continued confidence in the merits of the undertaking, and in its ultimate success. The engineer's report stated that some of the works were suspended during the winter, but would be resumed as the season advanced. That 35 engines had been delivered on the line and 80 carriages, which were sufficient for the present traffic. The accounts to the 31st of December showed, that 3,305,922*l.* had been received, and 3,594,471*l.* expended: leaving a balance against the company of 288,849*l.* The revenue for the half-year on the Glasgow, Garnkirk, and Coatbridge, amounted to 16,921*l.*, and the expenses to 12,937*l.*, including interest, duties, and taxes, 4418*l.*; leaving a balance of 2984*l.*

The CHAIRMAN moved the adoption of the report, which was seconded and agreed to.

In answer to a question, the CHAIRMAN stated that the average traffic carried on the line, including the Wishaw and Garnkirk lines, was 3000*l.* a-week. The amount on the Caledonian proper was about 2000*l.* a-week.

Sir A. AGNEW moved a resolution that no work be done on the Caledonian Railway on the Lord's Day, which was seconded. On the votes being taken, there appeared for the motion 438 shares, and against it 7686.

At the special meeting, held immediately afterwards, four bills were approved for enabling the Scottish Central Company to lease their undertaking to the Caledonian and other companies; to authorise the purchase of the Wishaw and Coltness; to improve the Glasgow and Coatbridge, the Clydesdale Junction, and the Wishaw and Coltness Railways; and to make branches, and to extend the Caledonian Railway across the Clyde. The directors were authorised to borrow 180,200*l.*—Thanks were voted to the chairman, and the meeting separated.

SOUTH DEVON RAILWAY—ATMOSPHERIC SYSTEM.

The usual half-yearly meeting of shareholders was held at the Royal Hotel, Plymouth, on Tuesday, the 29th February.

THOMAS GILL, Esq., in the chair.

The SECRETARY (Mr. Carr) read the notice convening the meeting, and the directors' report, which stated, that the directors, influenced by the extraordinary pressure of the times, had found it necessary to restrict all expenditure to the completion of the arrangements which were already in operation, and of that portion of the main line on the eve of being opened. The necessity for that continued restriction had passed, and they should urge the completion of the unfinished works with all expedition, with the exception of the Torquay branch and its continuation to Brixham, which might advantageously be deferred. The receipts to Dec. 31, on capital account, had been 1,626,784*l.*; expenditure, 1,609,070*l.*—leaving a balance in favour of the company of 17,714*l.*

The following is the report of Mr. I. K. Brunel, the engineer:—

Since the last half-yearly meeting, the atmospheric system has been completed, and brought into active operation—at first with a limited number of trains between Exeter and Teignmouth—subsequently to Newton, and latterly with all the trains between this latter and Exeter, a distance of rather more than 20 miles. Notwithstanding many difficulties, I think we are in a fair way of shortly overcoming the mechanical defects, and bringing the whole apparatus into regular and efficient practical working; and, as soon as we can obtain a good and efficient telegraphic communication between the engine-houses, and thus ensure proper regularity in the working of the engines, we shall be enabled to test the economy of working. At present this is impossible, owing to the want of the telegraph, compelling us to keep the engines almost constantly at work, for which the boiler power was not intended, and is insufficient; and, the consequence is, that we are not only working the engines nearly double the time that is required, but the boilers being insufficient for the supply of steam, the fires are obliged to be forced, and the consumption of fuel is irregular and excessive. There is every prospect of this evil being speedily removed; and as the working of the atmospheric system will then become the subject of actual experiment, and its value be practically tested, I shall refrain from offering at present any further observations upon it. The engine-house at the summit at Dainton, between Newton and Totnes, is completed: preparations are making for erecting the engines, and the pipes are being laid upon the line. As regards the works upon the line, I am happy to say that my report may be very brief. Upon the portion opened to the public, between Exeter and Totnes, everything has stood remarkably well, and the fears entertained by some of inconveniences likely to arise from the action of the sea have not been realised. Between Totnes and Laira Green, where the temporary Plymouth station is being erected, the works may be said to be completed; and, as soon as the permanent way and the stations are ready, the line may be opened to the public. But, for the unfavourable and very wet weather which we have had for the last two months, this might probably have been now effected; but, although somewhat delayed by the weather, a few weeks must now suffice. The Torquay branch is also within a few weeks of completion to the proposed station, at the point of junction with the Brixham extension; and the permanent way may be laid, and the line opened in two or three months from the present time. Between Laira Green and Plymouth the works have proceeded slowly—but the tunnel at Mutley has been nearly completed, about 40 yards only remaining unfinished; and the other intermediate works could now be easily completed before the station could be built.

The CHAIRMAN, in moving the adoption of the report, observed, that the atmospheric system had proved so successful, that the locomotive had been entirely withdrawn from the line between Newton and Exeter. The income on the whole line, at the present ratio, would be, for passenger traffic, about 130,000*l.* per annum; and the goods traffic would produce 300,000*l.* a-year more. He thought their prospects good, and that the line would pay equally well with any railway in the country.

Mr. WOOLLCOMBE entered into a long statement to show the success of the atmospheric system; he had taken great pains in watching the running of the trains, and he found, that, out of 864 trains, 790 had either gained time, or had done the journey in the exact time; of these 513 were exact, and gained from 1 to 5 minutes; 252 gained from 6 to 10 minutes, and 25 from 11 to 15 minutes; 94 trains had lost time—70 from 1 to 5 minutes; 14 from 6 to 10 minutes; 3 from 11 to 15 minutes, and 7 16 minutes and upwards; 1 lost 17 minutes; 1 21 minutes; 1 42, 1 56, and 1 17 minutes; 1 34, 1 37, 1 50 minutes, and three trains were obliged to be worked by locomotive power—thus making the whole number of failures 10, or about 1¼ per cent. of the whole number inquired into.

Mr. ELLIS contended, that, at present, the atmospheric system was but an experiment, and it would not be satisfactorily tested until it had been tried on to Totnes. It was between Newton and Totnes that the heavy ground of the line lay, and its economy and power could not be known until tested there; he wished to know how long it would be before it was open to Totnes?—Mr. BRUNEL said, three or four months.—Mr. ELLIS asked for a repetition of the pledge by the chairman, that not a farthing should be expended on the system below Totnes, until it had been fairly tested.—The CHAIRMAN said, with the exception of the engines at Rattery and Hennerdon, nothing should be expended on the system until the matter had been brought before the shareholders.

J. Rundle and E. St. Aubyn, Esqs., were re-elected directors; W. H. Evens and N. Lockyer, Esqs., were re-elected auditors.—The report was adopted; and thanks having been voted to the chairman, the meeting separated.

IMPROVEMENT IN RAILWAY BREAKS.—A patent has been taken out by Mr. E. W. Eton, of New Windsor, for a novel description of break for railway carriages, which is intended to be self-acting. On the sides of the carriages, and as close to the wheels as possible, without touching, are fixed the breaks, which are to be made of wrought-iron, hollow, and (for what earthly reason we know not) filled with water, with a safety-valve. To bring the breaks into operation, the whole body of the carriage is lowered, and rests, with its entire weight, on the wheels—thus effectually preventing its advance. To effect this, the body is supported on the frame by large screws, the incline of the worm being at a large angle, similar to the screw of a printing press, and termed by the patentee "circular incline planes." To these screws are attached cross levers, all connected together in such manner, that should the train be retarded, so as to bring the buffer heads together, they press upon the cross levers, by which the connecting rods are drawn forward; and these being attached to the heads of the screws, will cause them to be turned, and allow the whole weight of the body of the carriage to press the breaks on to the periphery of the wheels—and on the buffers again separating, the breaks are raised from the wheel by the action of a tug-chain, or rod. In another arrangement of the apparatus for the locomotive engine, the break is formed in two segmental portions, and embraces the lower portion of the periphery of the wheel; and as no carriage precedes the locomotive, and, consequently, the buffers cannot act on them, the patentee proposes a steam cylinder, with piston and rod in connection with the cross levers—the cylinder provided with a slide-valve, so that the steam can be admitted on either side of the piston, at the option of the engineer.

FALLING OF A RAILWAY BRIDGE.—On Friday afternoon a bridge, erected on the line of the Reading, Guildford, and Reigate Railway, at Earley, about two miles from Reading, fell entirely in. At the time of the occurrence a long train of waggons, laden with earth, was descending an inclined plane, when, on arriving at the bridge, all the foremost passed over safely, without any danger being apprehended; but, on the last waggon crossing, being more heavily laden, the bridge gave way, and, along with the fall of the waggon and its contents, produced a most frightful crash. The hind waggon became disengaged from the others by the breaking of the connecting chains, or the whole train of waggons must have been pulled in. The mass of earth and other material were scattered in all directions, and the waggon much shattered; fortunately, no persons were passing along the road at the time. A partial stoppage of the works, causing a number of hands to be thrown out of employment, has taken place in consequence. The bridge had but recently been constructed; and it is supposed that the heavy gale of wind and rain during the previous day, with the ponderous weight of earth running over it, probably weakened it.

NEW METHOD OF TREATING THE ORE OF PLATINUM.—The operation usually resorted to for obtaining pure platinum from the ore, is tedious and expensive—employing 8 or 10 parts of acid to one of platinum. M. Hess suggests the following as an improvement:—He melts one part of platinum ore with two or three of zinc, forming an alloy so friable as easily to be reduced to a fine powder. This powder is to be sifted, and on it poured dilute sulphuric acid, at the common temperature of the atmosphere. The temperature is then gradually raised, and the metals allowed to macerate as long as there is anything to dissolve; the acid in a short time separates all the zinc from the alloy, and the principal part of the iron contained in the ore. A solution is obtained in which hydrosulphuric acid produces no precipitate. Having poured off the liquid, the residue is a fine powder, which, having been well washed, is treated with nitric acid, which dissolves the copper, and other foreign metals; the platinum is then dissolved in nitrochloric acid, and then proceeded with in the usual way.

IMPROVEMENT IN SILVERING MIRRORS.—Mr. T. Fletcher, of Birmingham, has taken out a patent for a method of coating glass (after silvering) with metal, by the electrotype process, whereby the quicksilver is protected from injury, and a stronger power of reflecting light given to the speculum. He takes a glass plate, which has been silvered, and lightly and carefully coats the back, or silvered side of the same, with a varnish composed of two ounces of shellac, half a pint of highly-rectified spirits of wine, and half an ounce of the best lamp-black; this varnish protects the quicksilver from damp, and from the acid used in the subsequent process. Before the varnish is quite hard, he shakes, from a muslin bag, finely-pulverised plumbago, black oxide of manganese, or any other metallic powder, or covers it with thin metal; so that the whole surface which has been varnished will be covered with a perfect but thin coat of metal; after which it is submitted to the electrotyping process, and by this means a thin coating of copper, or other metal, will be precipitated over the entire back of the plate.

NORTH OF ENGLAND MUSEUM OF ECONOMIC GEOLOGY.—Geology as a science has, during the present century, made a more rapid degree of progress than any other branch of study; and, from a crude and ill-defined mass of conjecture and inexperience, has arisen the elements of a science of the utmost importance to the industrial resources of a nation. The growing perfection of the study of geology, particularly as applied to the economic purposes of life, caused the establishment of the institution in Craig's-court, London, known as "the Institution of Economic Geology," and in which is contained specimens of stones, minerals, earths, and other varieties of the productions of the earth applicable to the arts and sciences. We are glad to see that in other places it is probable similar institutions will arise; we have before us a prospectus for the establishment of one at Newcastle, under the name of "the North of England Museum of Scientific and Economic Geology." It is intended to afford instruction in the principles of geology, such as the general characters of the materials composing the earth; the principal animated forms which have successively lived on its surface, and the order of their creation; physical changes; geological phenomena of the North of England; and the application of geology generally to mining, engineering, agriculture, manufactures, the arts, and professions. The staple products of the north of England and its manufactures are principally the product of the earth's strata; and as many valuable professions are brought into operation in consequence, such an institution will be most opportunely established, through which the student will be able to qualify himself at moderate cost; while the series of lectures to be continued throughout the year, will, in this age of science, form a powerful attraction to the inhabitants generally. It is proposed to establish two classes—patrons and students; the former to have the privilege of distributing tickets to poor artizans to attend the evening class, and the latter to receive either private or class instruction.

THE IRON MOUNTAIN OF MISSOURI.—Few persons who have not visited the far west are aware of the untold wealth of the mineral regions of Missouri. Her mountains of iron, caves of lead, and mines of copper, are supposed to be of sufficient magnitude to supply the world for the next 5000 years. There is a tradition connected with the discovery of the iron mountain, religiously adhered to by the inhabitants about Potosi and Caledonia towns in its immediate vicinity. It is, that the first man who attempted to ride a shod horse over the mountain found himself suddenly "brought up standing" by the magnetic influence with which the metal was charged. He was in a dilemma, and, in looking about for assistance, encountered a blacksmith, who, in attempting to lift the animal's foot, found it firmly fixed in what he supposed was a rock. The son of Vulcan proceeded to unclinch the nails, and, after a severe flagellation upon the innocent brute, succeeded in moving him out of his shoes. This immense and valuable resource of Missouri has, until recently, remained untouched, and not until during the last year was a single furnace erected to bring it into requisition. A number of furnaces have since gone into operation, and large quantities are now daily manufactured for transportation. We notice that experiments have recently been made in England, which prove the superior quality of the metal. A large quantity of the pig-iron made at the Iron Mountain was recently sent to Messrs. Rodgers and Son, of Sheffield, England, by whom it was manufactured into steel, and then converted into articles of cutlery, consisting of razors, pen and table knives, &c. The *St. Louis Republican*, alluding to the success which attended these experiments, remarks:—"The manufacturers—and their names are a sufficient guarantee of their judgment—pronounce the iron to be of a superior quality; and believe that, for the manufacture of steel, it will prove equal, if not superior, to any now used. The cutlery made from it bears the highest polish, and carries a fine edge. If upon trial it should be found to equal the present appearances, it will prove worth more than any gold or silver mines.—*Cincinnati Signal*.

HOLLOWAY'S PILLS, THE MOST CERTAIN, SAFE, AND SPEEDY CURE FOR DROPSY.—This disease, to which so many of the human race are subject, and more particularly females at the meridian of life, may be cured by the use of Holloway's pills. The numerous cures effected by this valuable medicine, already known to the public, are sufficient evidences of its efficacy to induce any person to give it an immediate trial who is suffering from dropsy, whether it be in the flesh, the chest, or any other of its various forms, as no remedy has yet been discovered that is so successful in eradicating this disease as Holloway's pills and ointment, which are sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London. 43

MELLING'S IRON BAR-TWISTING MACHINE.

Fig. 1.

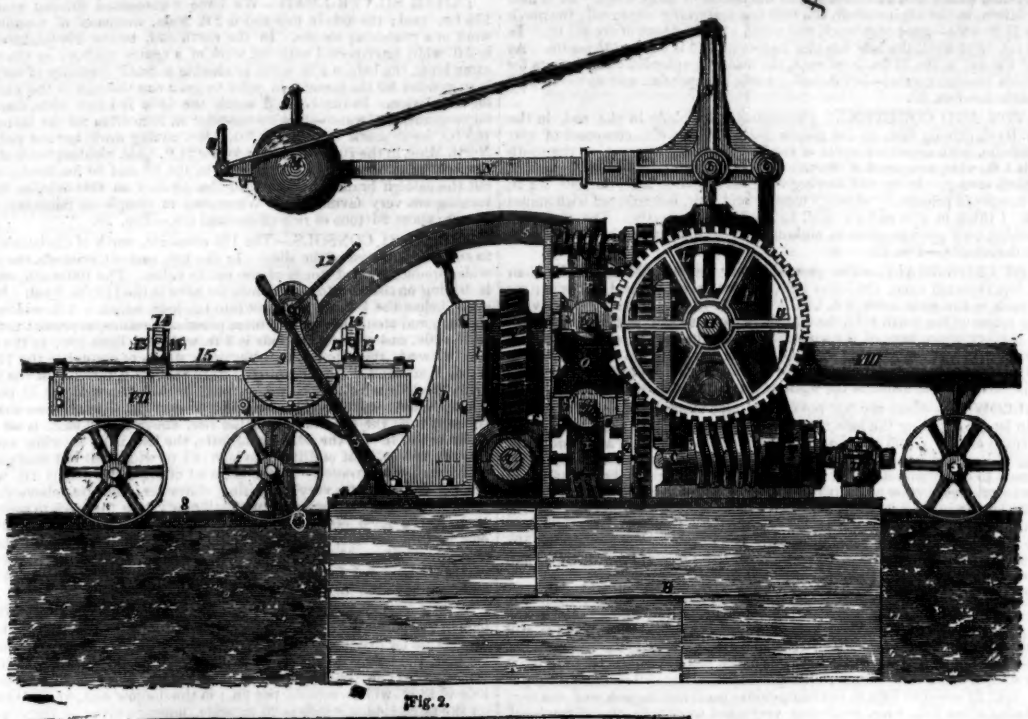


Fig. 2.

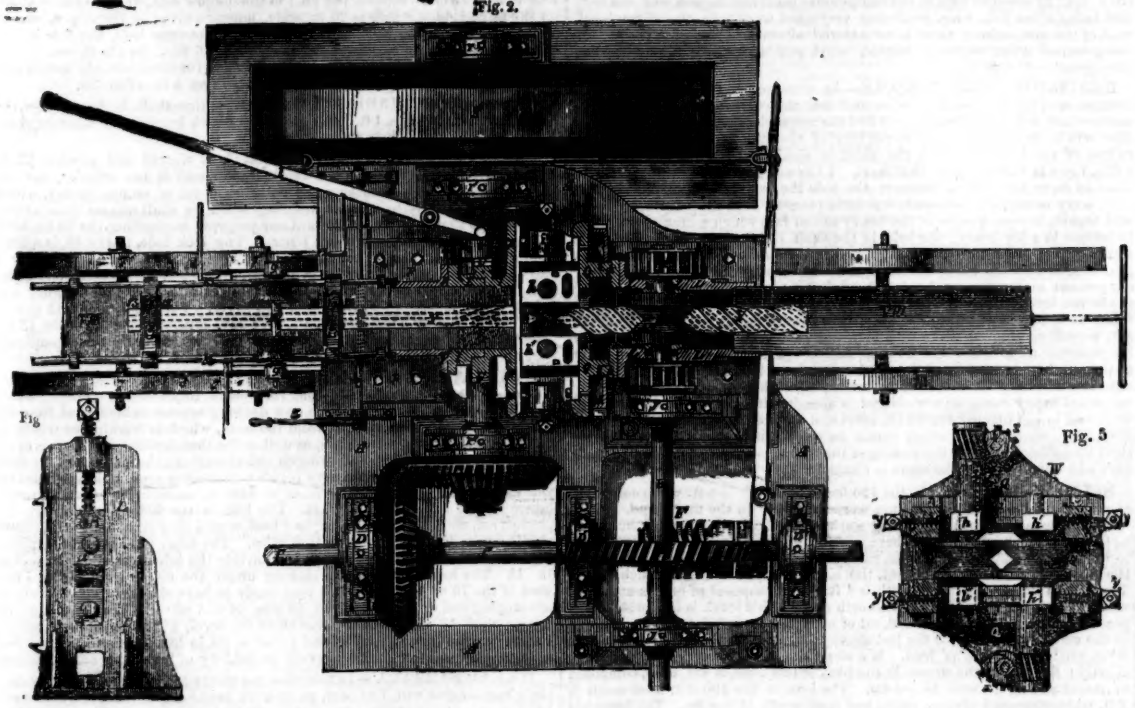
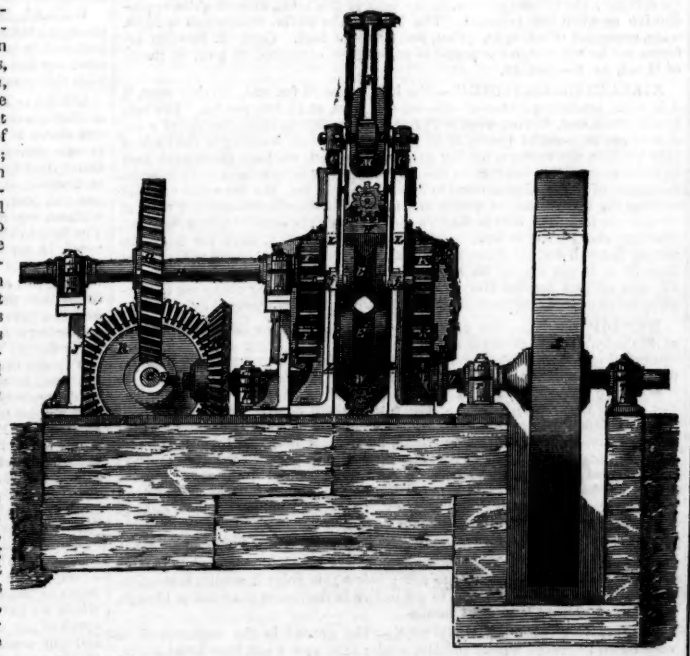


Fig. 5

Fig. 3.



In former Numbers we have given an account of various improvements connected with steam-engines, railway locomotives, &c., patented by Mr. Thomas Melling, of the Rainhill Iron-Works, near Liverpool. One of these consisted in manufacturing the shafts, connecting-rods, axles, tyre-bars, and other similar parts of machinery, of several rods of iron, "twisted together" (after the manner in which ropes are spun), instead of making them of one piece, as usual. That there would be a great gain in strength by such a mode of manufacture, was not, we believe, questioned by any one; but it was supposed by some—not without apparent reason—that the difficulty of the operation, arising from the intractibility of bar-iron, as compared with rope or wire, would prevent it from coming into general use. We are happy to say, that this difficulty has been completely overcome by the ingenuity and perseverance of the patentee. He has constructed a machine for the purpose, and had it for more than a twelvemonth in full operation, which is of such power, that bundles of strong iron-rods are twisted together by it, with as much facility as if they were so many reeds. The iron is first piled up in bars, then twisted by the machine, and subsequently finished by hammering and rolling to any required form. From the accompanying engravings of the machine, it will be seen that there are two pairs of rollers, which receive the bars to be twisted. One of these pairs, or the "delivering rollers," rest in two cheeks, and simply revolve upon their own axis; whilst the other pair, or "revolving rollers," have not only a motion about their own axis, but also revolve, along with the plates by which they are carried, in a plane at right angles with the bar to be twisted. The bar, or pile of bars, being passed through the revolving rollers, and between the "delivering rollers," the upper delivering roller is then pressed upon it, either by a lever and weight (as shown in fig. 1), or by a screw (as in fig. 4). Being thus prevented from turning at one point by the delivering rollers, and forcibly carried round at another by the revolving rollers, it is obvious, that between these points a twist must take place; whilst the revolutions of both pairs of rollers upon their own axis, at equal rates of speed, not only serve to carry the pile of bars forward, but to keep it perfectly straight, without any unequal stress being imparted to any portion of the pile.

Fig. 1 is a side elevation of the machine, with the carriages for conveying the bars to and from the furnaces, &c.: a portion of the driving gear being omitted in this view, in order to show the other parts more clearly.

Fig. 2 is a plan. In this view the principal parts of the machine are shown in section, and the whole of the driving gear is exhibited.

Fig. 3 is an end view, taken from the end at which the bars are delivered, or looking upon the delivering rollers.

Fig. 4 is a side view of the delivering rollers and checks, detached from the rest of the machinery, showing how the position of the upper roller is regulated by a screw, instead of by a lever and weight (as in fig. 1).

Fig. 5 is a front view of the revolving rollers, showing the movement by which the revolution about their own axis is obtained.

A, is the bed-plate of the machine; B, the stone foundation upon which the bed-plate rests; C, the driving-shaft, to which the power is first applied; D, D′, D″, pedestals attached to the bed-plate, for carrying same; E, E′, the delivering rollers. From the driving shaft, C, motion is communicated to the lower delivering roller, E′, by the worm, F′, the worm-wheel, G, the shaft, H, and the two spur-wheels, I, I. The object in giving motion to the lower roller first, is to leave the upper one at liberty to be raised or lowered, as circumstances may require. J, J′, are two standards carrying pedestals, in which the shaft, H, works; K, K′, are two spur-wheels which communicate motion from the lower to the upper delivering roller. The journals of the delivering rollers work in four plummer-blocks, *a*, *a′*: *a″*, *a‴*, which rest in two cast-iron cheeks, L, L. These cheeks are bolted, and further secured by keys, to the bed-plate, A. The pressure upon the upper delivering roller, E, is obtained by the weight, M, and the lever, N, and communicated to the plummer-blocks, *a*, *a′*, by the centre pin, *b*, and the two spindles, *c*, *c′*. The lever, N, is carried by two links, *d*, *d′*, connected with it by the centre pin, *e*, and working upon two studs, *f*, *f*, inserted in the cheeks, L, L; *g*, *g*, are two wrought-iron loops, to either of which a rope or chain from a crane, or a pair of blocks, may be attached, for raising the lever, N. The revolving rollers, O, O′, are carried by four plummer-blocks, *h*, *h′*, *h″*, *h‴*, fitted to two cheeks, *i*, *i′*, which are bolted, and further secured by keys, to two cast-iron plates, P, Q. On the back of the plate, O, is cast a circular ring, which is truly turned and fitted into a corresponding plate or carrier, *k*, which is affixed by screw-bolts and keys to projecting flanges cast on the cheeks, L, L. On the back of the plate, P, is cast a worm-wheel, U, which is bored out, and works upon a carrier, *l*, turned to correspond. The carrier, *l*, is bolted and keyed to a strong cast-iron bracket, *p*, which is also bolted and keyed to the bed-plate, A. Motion is transmitted to the revolving rollers from the driving-shaft, C, by a pair of mitre-wheels, R, R′, the shaft, *q*, the worm, V, and the worm-wheel, U, which wheel is, as before stated, cast fast to the plate, P; *r*, *r′*, *r″*, are pedestals bolted to the bed-plate, for carrying the shaft, *q*; S is the fly-wheel. The motion of the revolving rollers about their own axis is obtained by the plates, P and Q, carrying round with them two spur pinions, *s′*, *s″*, which worked into a fixed toothed rim, W, and thereby obtain a motion round their own centres, as well as the motion round the machine, which they derive from their connection with the plates, P and Q. The motion of the pinions, *s*, *s*, round their own centres thus obtained, is transmitted to the revolving rollers by the two worms, *w*, *w′*, on the pinion shafts, and the two worm-wheels, *x*, *x′*, on the roller shafts. *y*, *y′*, *y″*, *y‴*, are screws for regulating the revolving rollers, according to the size of the bar; and *z*, *z′*, stays for keeping the plates, P and Q, at the proper distance from each other. The machine, in fig. 2, is represented as thrown out of gear whilst in the act of twisting a bar, Y. This disengagement is effected by removing, by the levers, I, I, the clutch-boxes, 2, 2′, from the corresponding clutches cast on the worms, F, V, these worms being loose upon their shafts. The office of the levers 3 and 4, the shaft 5, and the rod 6, is to enable the attendant to engage or disengage the delivering rollers whilst at the opposite end of the machine. VII, is the carriage for conveying the bars from the furnace to the machine; it is mounted upon four wheels, 7, 7′, 7″, 7‴, which run upon a tram-road, 8, 8′. To the body of the carriage are affixed, by bolts and nuts, two brackets, 9, 9′, which carry a cross-shaft, 10, and two pulleys, 11, 11′. Round the two pulleys, 11, 11′, are coiled chains for drawing the bars out of the furnace, the ends of these chains being attached for that purpose to a box, which is slipped over the end of the bar whilst in the furnace. The ends of the shaft, 10, are square, to receive a handle, 12, or, if necessary, a handle may be attached to each side of the carriage. 13, 13′, are two guides for supporting the pile of bars to be twisted, and which also serve to keep the several bars together. To admit of these guides, 13, 13′, moving freely round with the bars, they are turned on the outside, and fitted into two cast-iron rings, 14, 14′, which are bored to correspond. These rings are put together in halves, much in the same way as in the ordinary eccentric strap, and are carried by two rods, 15, 15, connected with the body of the carriage. VIII, is the carriage for receiving the bars when twisted, and conveying them to the hammer and rolls; it is simply a semi-circular trough, mounted on a pair of wheels, with a handle for moving it about.

It has been found that railway tyre-bars thus formed, besides being much stronger than others, possess this further advantage, that they neither wear flat, nor spread out at the edges. Mr. Melling proposes to improve them still further, by making the inside body of each pile of iron, and the outer of steel. The exterior of the tyre would be thus considerably hardened, without their general strength being at all impaired.

Another advantage peculiar to these compound bars, independent of their superior strength, is exemplified in their application to piston-rods, air-pump rods, and other like parts of machinery, which have to work through stuffing-boxes or in guides. When such rods are manufactured out of single pieces, with the grain running all one way, they are very liable to become grooved; but when made of Mr. Melling's twisted bars, the grain of the metal being brought into a position almost at right angles with the line of motion, the tendency to grooving is completely counteracted. —*Mechanics' Magazine.*

INDURATING BUILDING MATERIALS, PASTEBOARD, &c.

[Specification of patent granted to William Hutchison, of Barnsbury-park, Middlesex, marble merchant, for certain improvements in treating pasteboard, and other substances, rendering them compact and impervious to wet, frost, vermin, and other destructive agents. (Communication from abroad.) Patent dated Nov. 25, 1847.]

If alchemy has never succeeded in the grand scheme of turning stocks and stones into precious gold, yet its offspring, modern chemistry, may boast of having achieved transmutations more surprising, and if we try them by the test of utility, of far more importance to the world at large. Mr. Hutchison adds another practical improvement to the list of achievements in modern art and science; for he now comes before the public with a patent for converting such substances as plaster, plaster of Paris, clay, &c., into marble of the finest polish, hard and impervious stone, and even with the more intractable substances, rendering them thoroughly compact and impervious, and fitted for many purposes for which tiles, slates, and even iron, have hitherto been employed. But we will at once set this specification before the readers of the *Mining Journal* as it stands.

In order to carry this invention into practical effect, before proceeding to treat the substances to which the same is applicable, with the compositous matters, or things, requisite for effectuating the purposes of the same, it is necessary to submit the pasteboard, or substance, to be treated according to this invention, to a gradual but thorough drying process, in a chamber heated to from 60° to 130° Fahr., according to the character of such pasteboard, or other substance, to be treated, with the view to entirely expel therefrom all vegetable moisture, so as to render the same more readily absorbent of the aforesaid compositions, or composition, solution, or solutions, with which the pasteboard, or other substance, or material, is to be infiltrated, or impregnated, in order to carry out the said invention, as hereinafter particularly set forth and described. The pasteboard, or other substance, or material, hereinafter mentioned, must be worked, or fashioned, to the shape, form, or device required, before, or immediately after, submitting it to the drying process, and then subjected to the action of the particular solution suitable, under the circumstances of the case, as hereinafter described, for the purpose of rendering such pasteboard, or other substance to be treated, compact and impervious to wet, frost, vermin, and other destructive agents—all of which is effected, by this invention, in so perfect a manner, that pasteboard, or other the substances hereinafter-mentioned, after being treated in accordance therewith, are not liable to be deteriorated in value, or appearance, by any of the above means, and do, in fact, become thereby almost imperishable. The pasteboard, or other the substance under treatment, being dried, as aforesaid, is next immersed in a solution, composed of certain substances, matters, or things, hereinafter set forth and described, such solution, or solutions, being kept in a boiling state, both before and during the immersion of such pasteboard, or substance; and until it becomes sufficiently infiltrated, or impregnated, with such solution, which generally takes place in the case of pasteboard sheets in about half an hour, and upwards, if thicker than ¼ in., and so on, in proportion to substance. The solution, or solutions, composed of the substances, matters, or things, hereinafter set forth, is used for the purpose of rendering pasteboard, or other the substance under treatment, compact and impervious to wet, frost, vermin, and other destructive agents, and is altered, or varied, in the manner following, according to the character of the particular colour desired to be produced in, or upon, the said pasteboard, or substance, taking care that the proportions, in which the said substances, matters, or things are admixed, be such as those now set forth and described. To render pasteboard, or other the substance hereafter mentioned, compact and impervious, and produce light and other colours, resin, admixed with oils, tallow, or other greasy or fatty matter, with such admixture of vegetable or mineral colours, similar to those used by painters and others, as may be considered by the practical operator sufficient to answer the purpose of colouring the pasteboard, or other substance, in the manner, and to the extent, required in each case respectively.

To render pasteboard, or other the substance hereafter named, compact and impervious, and produce dark and black colours, pitch admixed with oils, tallow or other greasy or fatty matter, or coal tar, with or without a proportion of pitch or other bituminous substance, may be used. Or glue, gums, and other cohesive and hard substances, boiled into a solution, with a due proportion of oils, tallow, or other greasy or fatty matter, will effect a similar result; but resin and pitch, with the proper proportion of oils, tallow, or other greasy or fatty matter, coloured with a mixture of vegetable or mineral matter as may be desired, they being easily obtained, and being cheap and perfectly effective. The proportion in which the substances, matters, or things, composing the above solution, or solutions, are admixed together, are changed and varied according to the character of the pasteboard, or substance, under treatment, as follows:—For pasteboard 75 parts of resin, or pitch, and 25 parts of oils, tallow, or any other greasy matter, with the addition together, or separately, of pounded stone, chalk, slate, &c., thoroughly dried, and then mixed therein as required, will produce, after exposure to the action of cold air, a flexible, but compact and impervious substance for the purposes of sheet roofing, sheathing of ships, railway and other carriages, pipes, tiles, &c., and will effectually resist the action of air, water, frost, vermin, and other destructive agents. Paper, old rags, hemp, flax, jute, tow, ropes, and cordages, even hay and straw, or other vegetable matter, either mixed together or not, and formed into a substance, being prepared for that purpose, by being boiled or mashed together, and then shaped to the desired form, afterwards thoroughly freed from all moisture, as hereinbefore mentioned, and submitted to the above boiling solution, which will produce a similar result, as above stated. Soft and porous wood for railway sleepers, and many other purposes, is treated in a similar manner as before described—the proportion of the boiling solution being 70 parts pitch or resin, and 30 parts of oils, tallow, or any other greasy matter kept boiling during one hour, if ¼ in. thick, and so on according to the substance thereof. Plaster, plaster of Paris statues, busts, and all ornaments made therewith; also chalk and alabaster; also all porous art manufacture made of clay or other absorbent material, is, or are, treated with a boiling solution, proportioned thus—75 parts pitch or resin, and 25 parts oils, tallow, or fatty matter, coloured with vegetable or mineral matter, as before stated. With regard to plaster and plaster of Paris, great care and precaution must be adopted, in gradually drying them, taking care, that previous to submitting them to the boiling solution, they be not heated too much—60° being found the most suitable; also taking care not to continue them in the above boiling solution too long—say from one to two hours, and so on in proportion to cubical contents. In case of soft porous stone, such as sandstone, the proportion of the boiling solutions consist of 90 parts pitch or resin, and 10 parts oils, tallow, or fatty matter. For comparatively hard and compact stones, such as the oolitic and porous marble, 80 parts pitch or resin, and 20 parts oils, tallow, or fatty matters, coloured with vegetable or mineral matter, as before stated, if required; and it is advisable, with regard to the more porous kinds of stone, such as sandstone for instance, which would not be easily workable, without being first dried, to proceed by drying them, then working, or fashioning, them, and afterwards drying them again, before treating them with the composition, or compositions, solution, or solutions, as before described.

When the stone, or other the substance under treatment, has become so dry that no vegetable moisture remains therein—which can be ascertained by striking it, when, if it be perfectly dry, it will give forth a ringing, or metallic sound—it is then in a fit state to be subjected to the action of the particular solution suitable under the circumstances of the case, as hereinbefore described, for the purpose of hardening such stone, or substance, and rendering it impermeable, or impervious, to water, air, and frost, and impenetrable to the attacks of vermin and other destructive agents. Wrought-iron or copper tanks should always be used to boil the aforesaid solution or solutions in; and they should have lids, or covers, to them, with distillating pipes proceeding therefrom, to carry off the spirit and gases generated, and to deposit the same in a suitable reservoir, or suitable reservoirs. All the substances herein named, when submitted to the above process, or processes, should be laid carefully in a suitable metal frame, each part separated from the other, which should be lowered into the proper solution (kept boiling previous to and during their immersion therein), either by a crane, or other convenient mechanism, and raised in the same manner, and lodged thereby in such boiling solution, till the surface is freed from the superfluous matter, and then withdrawn and exposed to the action

of cold air, which effectually indurates them, and renders them impervious to atmospheric action, vermin, and other destructive agents. For the purpose of joints, as required in facing, pipes, and any other work, either pounded stone or marble, chalk, sand, plaster, clay, or similar materials, is or are made use of, being first thoroughly dried, and then mixed with the boiling solution, in the proportion of 70 parts of pounded material, as aforesaid, with 25 parts of boiling resin, or pitch, and 5 parts of oils, tallow, or other greasy matter, mixed therewith; the whole to be well mixed together, and then applied to such joints, or other purposes, while in a warm state. Blocks, or squares, or any other desired shape for building purposes, hydraulic, or other work, are made with this last compound by transmitting the hot mixture, as before stated, in metallic moulds, and afterwards by exposing them to the action of cold air, which renders them excessively hard and impervious. The said compound, when cold, can be made applicable to any other shape or purpose, by being heated, either by a hot iron, or in a suitable vessel, such as used for plastering, and other purposes. Sand or clay, mixed with flint or gravel, is treated in a similar manner, as before stated.

To polish and give the greatest amount of impermeability to stone, plaster, plaster of Paris, chalk, and the like substances, when withdrawn from the before-mentioned boiling solution, and become quite cold (until which they are not in a fit state to be operated with or upon in any way), their surfaces should be smoothed, or rubbed, with suitable materials, such as polishing-grit, or snake-stones, which renders them perfectly compact and unctuous to the touch, similar to polished marble, from the pores being permanently closed against atmospheric action, by the use of the before-mentioned boiling solution, or solutions, or the substances, matters, or things before directed to be used for cementing joints, &c.; and by simply rubbing the exposed surfaces with a warm calico rag, or other similar soft material warmed, a finished polish will be almost instantaneously obtained, equalling in every respect that of the finest marble, and being permanent and lasting.

Having now described the nature of the said invention, and in what manner the same is to be performed, I would have it understood, that I am aware that it has been formerly attempted to treat various substances and materials so as to render them hard and impermeable, though not as hereinbefore stated; and therefore, what I claim as being the said invention, communicated to me by a certain foreigner, residing abroad, as aforesaid, is the use and application of the process, or processes, hereinbefore particularly set forth and described, for treating pasteboard and other substances—rendering them compact and impervious to wet, frost, vermin, and other destructive agents.

That is the use and application of the process, or processes, hereinbefore particularly set forth and described, in regard to the substances and materials herein-mentioned:—

1. Pasteboard, paper, old rags, hemp, flax, jute, tow, soft and porous wood, and other vegetable material.
2. Plaster, plaster of Paris works, architectural ornaments made therewith, and art manufactures—made of clay or other absorbent material.
3. Stone, porous marble, chalk, and alabaster.
4. Cement, for plastering walls, lining reservoirs, joining pipes, cisterns, and other purposes; and also the process, or method, of polishing the aforesaid substances or materials, as herein set forth and described.

Patent-office and Designs Registry, 210, *Strand*, *March* 3.

Mining Correspondence.

ENGLISH MINES.

ANTIMONY AND SILVER-LEAD MINES.—This last week past we discovered a splendid antimony lode, 4 ft. 6 in. wide, worth 82*l.* per fm., and in a most beautiful strata, being a felspar clay, which is quite congenial for antimony ores. We are also in pursuit of a very rich silver-lead lode (supposed to be Wheal Sarah lode), and hope to cut it at the end of the week. We have found in costeaning towards the lode—that is, the silver-lead lode—upwards of two tons of silver-lead ores, some of which have been assayed—worth 20*l.* per ton for silver, and the strata is as above-stated. I herewith send you a sample of the antimony, which is of first-rate quality. There are five other lodes in the sett; and I do not hesitate to say, but what the mine is worth 3000*l.* Remember, this is a really good speculation. One thing more should not be omitted—I have, with two of our men, raised about five tons of the antimony ores, the same as I have sent you. I consider this one of the first speculations in the county, and the adventurers will be amply remunerated for their outlay; and I should strongly advise them to erect a smelting-house at Port Gavern, which is only two miles distant from the mine, where fuel may be had at a small expense.

BARRISTOWN.—Slob and Kiln shafts are sinking with all possible vigour; the latter is 5 fms. under the 18 fm. level, and the former 3 fms. The tribute pitches are looking much the same as last reported. In the adit end east the lode is greatly improved—now about 2 ft. wide, with a solid branch of lead, 6 inches wide, in it. We have also cut the lode 2 fms. east of the present adit end, by a cross-cut north from Dooge's shaft, which looks better still, the orey part of the lode being 10 in. wide.—Feb. 25.

BEDFORD UNITED.—At Wheal Marquis, I beg to acquaint you that the lode in the 90 fm. level, east of the sump winze, is 4 ft. wide, and worth 85*l.* per fm.; there has been no lode taken down in the level west; in the stopes, in the back of this level, the lode is 2 ft. wide, and worth 80*l.* per fm. There has been no lode taken down in the 80 fm. level east. In the 70 fm. level east the lode is 2 ft. wide, and unproductive; the lode in the 70 fm. level west, on the south lode, is at present small. The engine-shaft is 6 fms. 2 ft. under the 80 fm. level. In the 25 fm. level, east of the south engine-shaft, the lode is 2 ft. wide, producing stones of ore; and in the adit level east, on this lode, the lode is 18 in. wide, composed of spar and peach, with spots of tin in places.—Feb. 23.——At Wheal Marquis, I am happy to inform you, that the lode in the 90 fm. level, east of the sump winze, is 3 ft. wide, and worth 40*l.* per fm.; the lode in the 90 fm. level west is 2 ft. wide, producing one ton of ore per fm.; in the stopes, in the back of this level, the lode is 2 ft. wide, and worth 18*l.* per fm. The lode in the 80 fm. level east is 2 ft. wide, producing good stones of ore, and altogether more promising than it has been for some time past. In the 70 fm. level east the lode is 2 ft. wide, composed of spar and mundic, with stones of ore in places; the lode in the 70 fm. level west, on the south lode, is without alteration. We expect to hole the winze in the 47 fm. level west, on the south lode, which is 18 in. wide, producing stones of ore. In the 25 fm. level, east of the south engine-shaft, and in the adit level east, on this lode, there is no alteration. We weighed, at Morwelham, on Friday last, December ores, 119 tons; and sampled January ores, computed 117 tons (21 cwts.) of good quality ore.—March 1.

CALLINGTON.—In the 50 fm. level east the lode is from 1 ft. to 2 ft. wide, intermixed with mundic and spots of copper ore. In the 70 fm. level end, the lode is 2½ ft. wide, producing copper ores, and promising; the stopes, in the back of this level, will produce 3 tons of ore per fm. In the 90 fm. level, towards the great cross-course, the ground is favourable for driving. In the 100 and 90 fm. levels south, we are opening tribute ground. In the 125 fm. level south, we have a small branch of silver-lead ores; in the north ends the lode is about 1 ft. big, producing silver-lead ores. In the 112 fm. level south, the lode is 10 in. wide, and will produce ½ ton of ore per fm.; in the 112 north, we are opening tribute ground. In the 110 fm. level north, the lode is 10 in. big, intermixed with silver-lead ores. We shall have 50 tons of copper ores at quay, ready for sampling, in a day or two. The engine-house at Kelly Bray will be covered in to-day.—Feb. 28.

CARTHEW CONSOLS.—Our 10 fm. level end is improved since you were down—also the adit end going south—and I think it only fair to expect some good ore ground shortly from both ends; we have very strong indications leading us to this conclusion, and hope to be able to report to you favourably as regards this mine. We shall immediately collar up, and cut down the old engine-shaft at Legossic (the old mine), for the reception of the 66-inch cylinder steam-engine, and shall get her on the mine as soon as we get a little dry weather, and shall commence building the engine-house, &c., at the same time.

COATLITHE HILLS.—During this week the men have been employed in clearing a breakage in the house level; but I hope to resume clearing east from A shaft in a day or two.—Feb. 19.

COPPERBOTTOM.—A new discovery has just been made in this sett—a fine lode of grey copper ore, of rich quality—samples of which have been sent to the office by Mr. Paull, the purser. We have, in consequence, visited the mine, and finding 7 or 8 tons of copper ore at grass, computed to be worth 15*l.* per ton, raised within so short a space of time, and only 5 fms. from the surface, we directed a survey to be made by Capt. John Richards, agent of the Great Consols, who is one of the most eminent mining authorities in the county, and are now awaiting his report, which shall be forwarded when received. Mr. Paull's account of this discovery is, that it was made in carrying on the workings of the Fox Holt tin lode (from which we have sold about 400*l.* worth of tin, raised above the adit level within the last year); and finding that, from want of stamps to prepare the tin ore for sale, we are not realising the proper value, we have ordered the erection of some, as the cost will not exceed 50*l.*

DEAN PRIOR AND BUCKFASTLEIGH.—The sumpmen are engaged driving and cutting a plat in the 30 fm. level; I have set 1 fm. to drive, taking also into account the cutting the plat a sufficient size, for the sum of 6*l.* 10s., which will be carried into effect with all speed. In the 20 fm. level west we are driving on the south part of the lode, which is of a very promising character; in the pitch, in the back of the level, the lode is still looking well, and producing good saving work. The crusher is almost completed—that is, the fixing—and would have been ready for crushing the ores, had not the weather been so boisterous, which has hindered the masons; but one day will complete the building of the walls—and if the weather is favourable, in the course of the next week we shall be ready to put the crusher to work; and we have commenced dressing the ores—that is, the washing, picking, cobbing, &c.—in order to get ready to that effect.—March 1.

DRAKE WALLS.—Brenton's shaft has improved since my last for tin, but the ground is still troublesome for sinking. The 50 end, east of Brenton's, is now got into our best tin ground, where we have good branches; in the stope, east of Brenton's shaft, below the 40, good branches; in the stopes, west of machine-shaft, below the 40, saving work; in the stopes, east of machine-shaft, below the 40, saving work; in the end stopes, below the 33, good branches; in the end below the adit, east of footway-shaft, saving work. The new engine-shaft is 3½ fms. below the adit; the branches are small, some of them very good, but on the whole not rich. In the end on the north lode, near the Tamar, we are still driving by its side; I shall cut through it next month. The new engine works extremely well.

DEVON GREAT CONSOLS.—At Wheal Josiah, in Hitchen's engine-shaft, I am glad to say, the lode is still a fine course of ore, worth full 90*l.* per fm. In the 60 fm. level, east of Hitchen's engine-shaft, there is also a fine course of ore, worth at least 60*l.* per fathom. In the 70 fm. level, at Richards's shaft, nothing has been done since my last, the men having been engaged fixing plunger-lift, which will be completed in the course of next week. At Wheal Anna Maria, in the engine-shaft, the lode has materially improved; the north part is 2½ ft. wide—good orey work, and worth at least 4 tons of ore per fm. In the 40 fm. level west, the lode has also improved, and is worth 20*l.* per fm. At Wheal Fanny, in the 25 fm. level west, the lode is a splendid course of ore for the whole breadth carried—is 7 ft. wide, worth 120*l.* per fm., and no north wall yet reached.—Feb. 27.

DEVON AND COURTENAY CONSOLS.—The lode in the end, in the 40 fm. level, driving east, on the gossan lode, is 2 ft. wide, composed of spar and mundic, with occasional spots of ore; the end, driving east, on the south lode, is 1 ft. wide, composed of mundic and spar, with some spots of ore, but not worth saving. In the end, driving west, on the same lode, the lode is 1 ft. wide, composed principally of white mundic and spar, interspersed with stones of ore. I think in this end we shall have ore again shortly. The shaftmen are making very good progress in sinking the engine-shaft; the ground continues favourable.—Feb. 29.

EAST CROWNDALE.—The ground in our engine-shaft is harder than when last reported upon, the killas being mixed up with capel and spar; we have sunk in the past week 3 ft. 6 in. The lode in the 47 fm. level, driving on the course of the north lode, does not look quite so well as it did, although there is every appearance of it soon changing for the better; the character of the lode being just the same as when we cut the course of ore driven through. At Rix Hill the ground is cleared out for the new engine-house, and every preparation is making to dispatch the work as fast as possible.—Feb. 29.

GALLOWAY.—Since my last report, we have cleared out an adit level 11 fms. in length, crossing the lode under Earl John's workings; the lode here is very small and poor, and in a hard poor-looking rock; there are some small strings of lead and jack, but I do not consider the lode possesses sufficient inducement to explore on it at this place. We have also cleared open a shaft in the old workings, further north to the adit level, 3 fms. from surface. The lode here is from 18 in. to 2 ft. wide, and has evidently been productive, from the extent of ground stoped away both below and above the level. We can drop a line 5 fms. below the adit level in water. Our object now is to clear out the bottom of these old workings, and examine the lode, after which we shall better determine where to sink.—Feb. 26.

GREAT MICHELL CONSOLS.—The lode in the sump-winze continues to improve in character and produce, being 7 ft. wide, 2 ft. of which is producing very good work throughout the whole length of the winze (9 ft.), and is still promising further improvement. In the 35 fm. level, west of the sump-winze, the part of the lode being carried 4 ft. is in its general character promising, containing abundance of mundic, with spar, capel, and ore intermixed throughout.—Feb. 23.——The lode in the sump-winze continues to look well, the orey part being about 2 ft. wide, producing very good work. In the 35 fm. level, west of the sump-winze, there is no material alteration; the part of the lode being carried 4 feet contains mundic, capel, and spar, with ore intermixed throughout.—March 1.

HEIGNSTON DOWN CONSOLS.—In reference to the directions of the committee of the 3d inst., I have levelled and dialled the ground between the engine-shaft and Buddle's adit, and find the perpendicular depth of the engine-shaft will be 39 fathoms to get to the level of the adit, and 41 fathoms on the course of the lode on which the shaft is sinking—consequently, we have 7 fms. more to sink to get to that level. I likewise find we have 214 fathoms more to drive the adit to intersect the lode the engine-shaft is sinking on. I am sorry to say, we have made but little progress in sinking during the present month, in consequence of the heavy fall of rain which increases the water to bottom in a few hours; the lode in the shaft is 4 ft. wide, producing good stones of tin; and I anticipate a falling off in the water as the spring season approaches, or I should have increased the size of our lift ere this; but, under our present circumstances, I think it advisable to put the shaftmen to drive the 30 fm. level, at any time when they are prevented from sinking by the water as in this level; the lode has a very promising appearance. Buddle's adit we still continue to drive with four men, the ground in which is much of the same nature as it has been for some fathoms past. We have nothing doing at present, having suspended the tin dressing from the commencement of this month.—February 23.——I beg to inform you, that in consequence of the continued heavy rains, we are obliged to abandon driving the 30 fathom level west, and intend driving the 20 fm. level east by the shaftmen until the water diminishes, which I have every reason to expect in a short time, when we shall immediately resume the sinking of the engine-shaft. The ground in Buddle's adit remains much the same in character for driving.—March 1.

HOLMBUSH.—The lode in the 120 fm. level south is 5 ft. wide, composed of quartz and stones of lead, saving work; the lode in the north end, in this level, is also large, producing saving work; the rise, in the back of this level, is, for the present, suspended; there is not sufficient air for three pares of men to work at one and the same time, until the levels are extended further from the cross-cut, when, we doubt not, the circulation of air will be much better. The lode in the 110 fm. level south is 4 ft. wide, composed of quartz and lead, worth 6*l.* per fm.; the lode in the north end, in this level, is 5 ft. wide, composed of quartz and stones of lead, all of which is saved and stamped; the lode in the end, driving towards the last above-mentioned level (110 south), is 5 ft. wide, producing stones of lead. We expect to effect a communication here shortly; the lode in the stopes, in the back of this level, is 4 ft. wide, composed of quartz and lead, worth 5*l.* per fm. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, prian, and lead, worth 5*l.* per fm. The branches in the 100 fm. level east are still small but regular, and the ground favourable for driving; the tribute pitches, in the back of this level, are not quite so productive as when last reported. The lode in the 90 fm. level south is 20 in. wide, composed of soft spar, prian, and stones of lead. Capt. T. Bawden informs me he will weigh our parcel of copper ores, computed 98 tons, on the 2d of March next.—Feb. 29.

KIRKCUDBRIGHTSHIRE.—The lode in the 50 fm. end, driving west, is 4 ft. wide, producing stones of ore—set to 6 men, at 3*l.* 10s. per fm. The lode in the 40 fm. end, driving west, is 2½ feet wide, producing three-fourths of a ton of lead per fm.—set to 4 men, at 3*l.* per fm.; the pitch working in the back of this level, on the caunter, having greatly improved, we have considered best to drive east on the caunter in the 40 fm. level; the lode here is 2½ ft. wide, composed of spar and prian—set to 2 men, at 3*l.* per fm. We have also resumed driving the 30 end east, in which end the lode is disordered—set to 2 men, at 2*l.* 15s. per fm. The lode in Keith's shaft is much the same as before reported, yielding about 1 ton of lead per fm.—set 2 fms. to sink, at 5*l.* per fm. The setting list will further show, that 11 pitches have been set on tribute, varying from 3*l.* to 4*l.* per fm., to 28 men. On the 24th inst., we shipped 41 tons 12 cwts. of lead for the Holywell market. If the weather continues favourable, we expect to ship another cargo in course of three weeks.—Feb. 26.

MENDIP HILLS.—The appearance of the lode in the 38 fm. level, south of Stainsby's shaft, presents nothing whatever new, being about 3 ft. wide, composed chiefly of flookau and spar, with a little iron, ground rather harder for driving than it has been for some time past. In the slag department, we continue to press forward with the cutting towards the richer slag ground as fast as the unfavourable state of the weather will admit. The beds of stuff through which we are now opening are about 12 ft. thick, intermixed with layers of mud: this, as I before stated, I am quite prepared to meet at this point of the ground, although it contains some very good work rich in metal; and am glad to say, as we proceed up the valley, we find it improve in quantity. We have now several tons of slag prepared for the furnaces, and intend lighting them to-morrow morning early. Agreeable to order, I have ordered a furnace for remelting the lead into pigs, and preparations are now being made for the necessary masonry, previous to fixing it in its place.—Feb. 28.

SOUTH MOLTON CONSOLS.—Our shaft, which was completely gone together, is cleared and secured to adit; below this point it is quite firm—timber standing well. We expect to get in fork in the course of a week or 10 days, when we anticipate important results.

SOUTH WHEAL TRELAWNEY.—The ground in the engine-shaft is very much improved within the last week; it is now a soft blue killas strata, exactly like Trelawney and Mary Ann strata, with spots of lead and crystals of copper ore in it; it is now 25 fms. below the adit level, and should the ground continue favourable, as at present, we have every reason to believe 6 ft. a week will be sunk in future. The engine continues to work well, and the water is no quicker than heretofore—less than 2 strokes per minute keeps it in fork.—Feb. 26.

TAVY CONSOLS.—The pitch, in bottom of shallow adit, west of cross-course, is much improved in the last few days; I think we have a shoot of ore that has not been seen before. The two pitches in the back of the 12 fathom level are much the same as for some time past, producing a fair quantity of ore; the pitch in the bottom of the 12 is improved since my last, and has a leader of yellow ore 1 ft. 6 in. wide, and the lode altogether 8 ft. wide—good work. The rise from the 24 fm. level, on the lead lode, is at present poor. I expect the men will hole to the 12 some time next week, when we shall commence driving on the copper lode, west of cross-course, in the 24; also north on the lead lode, to cut the north copper lode, which is very likely to prove productive, as it was so promising in the 32. In the 36 fm. level, the shaftmen are putting in penthouse and other necessary work for sinking, which will be finished to-day; to-morrow we shall commence sinking likewise; they will finish cutting the plat by the end of this week; the lode in the bottom end west has a solid leader 4 ft. 6 in. wide, and at present, with the end, 7 ft. high—will produce 15 tons of ore per fm., worth 5*l.* to 6*l.* per ton; the lode in the bottom of the plat and shaft much the same as the lode in the end. I hope by Monday next to put six men to drive in the western end on the course of ore. In the east end of the 36 the lode is 5 ft. wide, all spangled with ore—good stamps' work, and likely to improve. We sampled on Monday 73 tons of ore, wet weight, which does not come up to my report at the general meeting; but I think the quality will make up for the quantity; and, from present appearances, we shall have both quantity and quality in the present month.—March 1

TAMAR SILVER-LEAD.—We have commenced driving south in the 175 fm. level; the lode in this end is 2 ft. wide, composed of mundic and ore, work of a promising nature. In the north end, in the 160 fm. level, the lode is 3 ft. wide, interspersed with ore work of a coarse quality; in the north end, same level, the lode is 9 in. wide, producing a small quantity of ore; this end is suspended for the present, in order to get a rise through to the 145 fm. level, for circulation. In the 145 end south the lode is 1 foot wide, discharging a large quantity of water—this we consider an indication for the better. In the 135 fm. level south the lode is 5 ft. wide, saving work, but not rich. At the North Mine, in the 70 fm. level, the lode is 2½ ft. wide, yielding work of good quality. We have begun the cross-cut in the 50 and 60 fm. levels, in order to cut the eastern branches, as we find the pitches on this lode, or branch, are turning out very favourably. We expect to sample on Saturday, the 4th of March, about 95 tons of rich silver-lead ore.—Feb. 28.

TRELEIGH CONSOLS.—The 120 cross-cut, north of Christoe's, is driving to cut the lode west of the slide. In the 110, east of Christoe's, the lode is 3 ft. wide, producing good stones of ore, not to value. The 100 south, east of ditto, is driving on the slide to cut the lode we have in the 110 fm. level. In Garden's shaft, below the 100, we have cut into the lode, which is 4 ft. wide—it is spar, mundic, and stones of ore, of a most promising return, at present not to value; in the 100, east of ditto, the lode is 3 ft. wide, but little ore; in the rise, above the 100 west, the lode is 2 ft. wide, with stones of ore only; the 100, west of ditto, is suspended for the present, until the rise is holed. In the 90, west of ditto, the lode is 1 ft. wide, with a small branch of ore, worth 3*l.* per fm.; the winze, below the 90 west, is suspended on account of water—we shall rise this through from the 100 fm. level; the rise, above the 90 east, is set on tribute at 3s. in the 1*l.* In the 80, west of ditto, the lode is 20 in. wide, worth 4*l.* per fm. In the 70, west of ditto, the lode is 1 ft. wide, but not much ore—it has a favourable appearance. In the 60, west of ditto, the lode is 2 ft. wide, worth 15*l.* per fm., and of a very promising character; the rise, above the 60 west, was set on tribute last month; we shall now rise in this back to prove the lode, as it has a good appearance, and worth 3*l.* per fm. In Wheal Parent adit end, east on the lode, the lode is 2½ ft. wide, with a very promising appearance, worth about 3*l.* per fm.; the adit cross-cut, north of ditto, is holed to the new shaft intended for an engine, and is sunk in the engine-shaft below the adit; we have too much water to sink at present.—Feb. 25.

WEST WHEAL JEWEL.—No lode taken down on West Wheal Jewel lode in the past week. The 30 cross-cut south, from Tolcarne tin lode, is still favourable for driving. In the 20 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 1 ft. wide, looking more promising for tin than it was when last reported; in the deep adit, west of Quarry shaft, on the same lode, the lode is 18 in. wide worth 5*l.* per fm.; in the shallow adit, west of Quarry shaft, on the same lode, the lode is 20 in. wide, unproductive; in the stopes, east of Pryor's winze, in the bottom of the adit, on the same lode, the lode is 5 ft. wide, worth 35*l.* per fathom—stoped last month, 6 fms. In the stopes, west of Pryor's winze, in the back of the 12 fm. level, on the same lode, the lode is 5 ft. wide, worth 26*l.* per fm.—stoped last month, 5 fms. 3 ft.—Feb. 28.

WEST WHEAL MARIA.—The western engine-shaft is down below the 64 fm. level about 4 fms. 1 ft.; the ground in which is much the same for sinking as last reported.—Feb. 29.

WHEAL ADAMS.—The new engine-shaft is cleared and secured 15 ft. below the 50 fm. level, at which depth the ground is not crushed, nor the timbers removed. We are engaged in fixing a lift of pumps to-day, which will be completed by to-morrow morning, when we shall resume clearing up; and we hope that nothing will retard our progress, in reaching the 60 fm. level at the time mentioned in our last report. The jack lode, in the 40, is a little improved. Other places are without alteration. We sampled yesterday a parcel of silver-lead ore, computed 28 tons, samples of which were forwarded to the smelters, to whom were also sent samples of a parcel of mundicy ores (about 20 tons), containing both lead and silver. The produce of both parcels shall be sent you by Thursday's post. We have finished our plan of the 18 fm. level, and I have commenced about the others; as soon as they are completed, they shall be forwarded to you.—Feb. 29.

WHEAL ANDERTON.—The lode in the 70 fm. level, west of engine-shaft, still retains its size (6 ft. wide), but very much improved in quality—a very good lode for tin, 3 ft. big; we are now drawing some excellent work from the end, and stamping rich tinstuff from the back, which is working on tribute to great advantage for the tributers, as well as the shareholders, and there is every probability of its duration both in depth and extension; the lode east of the slide, in the same level, is 4 ft. wide, very regular, producing some rich work, but not yet extended far enough from slide to form so satisfactory an opinion as to future results as I can of the west. The lode in the 60 fm. level is large and productive, the end being driven, and back stoped after it, at 6s. in 1*l.* (no tut-work)—men doing very well at that price. The other pitches are still returning a sufficient quantity of ore to remunerate the labourers at 6s. 6d. and 8s. in 1*l.* The lode in the winze, sinking under the 60 fm. level, about 7 fms. west of the 70 end, is large, and very likely to have the same shoot of ore we are stoping and driving on in the 60 west of said winze. We are sinking the engine-shaft by nine men towards an 80 fm. level, with all possible dispatch. I shall be ready to send off a good parcel of tin in less than a fortnight; and, from present prospects, there is every probability of increasing our samplings.

WHEAL BARBARA.—In this mine our works are progressing favourably; the steam-engine will, I expect, go to work next Saturday week, which would have been in action at this time, but for the very stormy weather we have experienced.—Feb. 29.

WHEAL MARY ANN.—The 30 fm. level cross-cut, at Pollard's shaft, is extended towards the lode 3 fms., but we have not yet cut it; however we expect hourly to do so. There is no alteration in the other parts of the mine since my last report, worth communicating. We are getting on pretty well with the quantity of ores for the next sampling.—Feb. 29.

WHEAL TRELAWNEY MINE.—The ground in the 62 cross-cut, west of Phillip's shaft, is favourable for driving. The lode in the 52 south is large, and worth 9*l.* per fm.; in this level north, the lode is 2 ft. wide, composed of gossan, mundic, and lead, and worth 8*l.* per fm.; the ground in both ends is easier than for some time past; the stopes in the back of this level are much as usual—looking well. The lode in the 42 north is 18 in. wide, composed of can and lead, and worth 10*l.* per fm.; the stopes in the back of this level are without any material change since my last—producing a fair quantity of lead. The lode in the 32 north is 1 ft. wide, composed of can, spar, and lead, and worth 7*l.* per fm.; in driving the last 3 fms. here, we have had repeated changes in the ground and lode, and, consequently, have been expecting to meet with the fair run of ground driven through in the 22 fm level, where the lode was much more productive than it has been for several fathoms at this level; however, we hope to meet with it soon; the stopes in the back of this level are producing a fair quantity of ore. The ground sinking under the 42 fm. level, in Trelayney's shaft, is considerably eased, and I think we shall get through the elvans in a short time. We have met with elvans in driving the 22 cross-cut west, between which and the killas there are some branches, composed of hardish quartz and carbonate of lime. At Vivian's, the 30 fm. level north is very similar to my last report; as is also the cross-cut driving towards the shaft.—Feb. 22.——The 62 cross-cut is extended 4 fms. 2 ft. east from Phillips's shaft, where the ground is favourable; and I expect to see the lode here by the latter part of this month. The lode in the 52 south is worth 10*l.* per fm.; and in the 52 north, which is improved, is worth 11*l.* per fm.; the stopes, in the back of this level, which have produced more than an average quantity of lead, are producing a fair quantity at present. The lode in the 42 north is worth 10*l.* per fm., and the ground rather hard; the stopes here, and to the south of the shaft, are improved since my last. The lode in the 32 fm. level north is worth 5*l.* per fm.; we set a new stope, in the back of this level, on Friday last, from which we expect a fair quantity of lead; the old stopes are much as usual. Trelawney engine-shaft is sunk 5 fms. under the 42 fm. level, where we have clean killas ground, which is favourable for sinking. I cannot speak of any change in the 22 cross-cut, east of this shaft. At Vivian's, in the last four weeks, the 30 fm. level has been driven 18½ fms. upon a beautiful lode, chiefly composed of gossan, can, and lead; and if the present fair ground continue, we shall open here, in a short time, a good length of orey ground. We weighed off January ores, on Thursday last, 88 tons 7 cwts. 1 qr., and shall sample February ores to-day, computed 83 tons; and I think the prospects of the mine altogether are very encouraging.—Feb. 29.

ACCIDENTS.

East Cramlington Colliery.—W. Tranent, who was employed to watch the fire and oil the engine, when necessary, at the pit now being sunk at the Shank-house, was, unfortunately, drawn into the machinery, and his body crushed in a horrible manner.

Fatal Steam-Boiler Explosion—Three Lives Lost.—Another dreadful fatality, from the explosion of a boiler, took place on Tuesday morning, when a boiler exploded at the cotton-mill of Mr. Richard Walker, Blue Pitts, near Rochdale. The end of the boiler was blown out, and three persons were killed almost instaneously—two others were seriously injured, and one of them was dying. The roof of the engine-house was blown off, and the building considerably damaged. The engineer and fenter were two of the killed.—Mr. Walker's mill has not been long erected, and the probability is, that the boiler was nearly new.

Neath.—John Hill, aged 64, was killed by a fall of stone, while working under Messrs. Penrose and Evans.

Merthyr.—D. Davies was killed by a fall of stone from the top of a level at Pennydarran.

Dudley Port, Tipton.—J. Sharwoods, while hooking the skip to the chain in Mr. Hopkins's coal pit, was caught by his clothes, and carried a considerable way up the shaft, when they gave way, and he fell down the shaft and was killed.

Old Buffery Works, Netherton.—J. Raybould fell into the fly-wheel pit of an old engine he was working, and was so mutilated, that he died shortly afterwards.

SILVER VALLEY MINING COMPANY.

A special general meeting of adventurers in this company was held yesterday, the 8d inst., at the offices, 44, Finsbury-square.

RICHARD HODGSON, Esq., in the chair.

The notice convening the meeting was read, and also the following—

DIRECTORS' REPORT.

The notices, which have now been read, will explain the objects of the present meeting; and in order to guide your proceedings, a statement of accounts, showing the exact pecuniary position of the company, has been prepared; and this statement had better first receive your consideration. The report of Capt. Eddy, the company's agent, will inform you of the result of the operations directed to be carried on under your resolution, passed on the 2d of Feb. last; and from this report the shareholders will ascertain, that the objects intended to be proved by the workings, ordered under such resolution, are not completely consummated, and, therefore, the future proceedings remain for your consideration and decision. In any case, it appears necessary that a small further call should be made of 2s. 6d. per share; and should the machinery upon the mine sell well, some portion of this may be redivided. Should the shareholders deem it prudent, or advisable, to further continue the workings of the mine, it will be necessary to pass a resolution to that effect, limiting the period of working to some definite time. Should, however, they decide upon the abandonment of the mine, and the dissolution of the company, it will be necessary to pass a resolution to that effect; and upon the confirmation by another special general meeting, to be called after 21 days' further notice, the company can be finally dissolved.

The following report from Capt. Eddy, the agent at the mine, was read:—

Silver Valley Mines, March 1.—I beg to inform you, that during the past month, we have driven the 80 fm. level end west, on the south part of the tin lode, 3 fms. 2 ft. Finding it impossible within the limits of the month to extend the end as far west as where we suppose the north and south branches would unite, we considered it best, in order to be more satisfied about the continuation, size, character, and bearing of the north branch, to open in the north wall. In doing this, we discovered this part of the lode, which, in the present end, is 5 ft. apart from the south branch, varying in size from 9 to 20 in. in width, and being composed of capel, spar, and mundic—it contains spots of tin, but throughout is poor. The south branch is 9 in. wide, precisely of the same composition as the north one, but consists of greater portions of capel, in which is a leader of good tinny stuff, 4 in. wide. The horse between the two branches is killas, intermixed with hard capel, and wet. If this hard capel does not oppose the courses of the branches, I consider they will form a junction within 3 fms. west of the present end. I am of opinion that the capel will not prove detrimental, as the north wall of the north branch is well defined and regular.

From the statement of accounts, it appeared that the balance from last account was 1013*l.* 5s. 10d.; cost for Dec. and Jan., 580*l.* 12s. 7d.; London expenses, 108*l.* 12s. 4d. = 1702*l.* 10s. 9d.—By calls, 490*l.*; tin sold, 94*l.* 10s.; interest on calls, 17s. 3d.: leaving balance against the mine of 1117*l.* 3s. 6d. To meet this there were unpaid calls, amounting to 1017*l.* 10s.—of which 475*l.* were good, and 542*l.* 10s. were doubtful; the greater part of which, however, was expected to be recovered There is also the machinery and materials, and about 100*l.* worth of tinstuff at grass.

In answer to Mr. Winstanley, the CHAIRMAN explained, there were 2560 shares, and he thought 251 only would not be paid upon.

Mr. HEATHORNE complained that this mine was the old worn-out Wheal Brothers Silver Mine, had a new name given to it, and offered to the public on interested motives; but the explanation of Mr. P. JOHNSON was perfectly satisfactory to the rest of the parties present. He said, the Silver Valley Mine was originally the Wheal Prosper, and Callington Common, Mines; they had taken the Wheal Brothers sett, because, from its situation, it might, by an adverse party, be rendered of great annoyance and hindrance in the working of their mine; but not one shilling had been expended on it; and all the tin and silver they had sold was obtained from the other mines.

Resolutions were then passed, for abandoning the mine, and winding up the concern [for which *see* advertisement]; and a vote of thanks to the chairman having unanimously passed, the meeting separated.

CARADON COPPER MINING COMPANY.

At a meeting of adventurers, at Webb's Hotel, Liskeard, on the 22d ult., the accounts were examined and passed, showing—Balance from last account to end of May, 24*l.* 16s. 3d.; labour cost and merchants' bills, 277*l.* 6s. 2d.=302*l.* 2s. 5d. By cash received on call, made 8th June, 1847, 151*l.* 19s. 10d; overcharge in former account, 3*l.* 7s. 6d.—leaving balance against the mine of 146*l.* 15s. 1d. It was then resolved, that a call of 1*l.* per share be made; and that the same be payable immediately, with arrears of former calls, to the purser, or to the East Cornwall Bank. The following report from Capt. Rule was then read:—

At our last meeting, it was hoped that we should have had surface water enough to work all the summer; but it being a very dry one, we had not sufficient to keep the mine drained; and therefore suspended all working for three months, during which period no costs were incurred; and having resumed in October, we have had no let since. I acknowledge that our shaft has been sunk sparingly, but the shaft is wet, and the ground hard; however, our men have worked well, and no time has been lost. The shaft is now sunk 9 fms. 2 ft. 6 in. below the 20 fm. level, and we expect to complete this lift in less than one month from this time. We expect daily to intersect a lode, which is from 9 to 10 ft. wide in the level over, and of a very promising appearance; when this is accomplished, we shall have about 6 fms. to drive south to intersect another lode, which is 4 ft. wide, and presents equally as good indications in that level. I think this lode may be cut within two months from the time we commence driving towards it. My calculations are as follows for our future operations—viz.:—Cost for January labour, say 50*l.*; cutting a plat, &c., in the 30 fm. level, 20*l.*; labour and expense in dividing and timbering the shaft to the 30 fm. level, 20*l.*; driving a cross-cut 6 fms., at 6*l.*, 36*l.*; driving 20 fms. upon each lode in the 30 fm. level, say 180*l.*; drawing, smithery, coals, pitwork, agency, &c., say 60*l.*=366*l.* However, before we expend the above amount, from the indications which now present themselves, I anticipate very favourable results.

DYFNGWM MINING COMPANY.

An adjourned meeting of adventurers in this mine was held at the London Tavern, on Monday, the 28th Feb., pursuant to advertisement.

W. W. TAYLOR, C.E., in the chair.

The CHAIRMAN, in opening the proceedings of the meeting, stated, that he had lately visited the mine and scene of operations, with which he was well pleased—the representations previously made having been fully borne out. He considered, that the mine was one of value, and well deserving of an outlay of capital in proving it further, by extended workings; while the present raising, and the past results, fully warranted him in thus expressing himself. The two lodes at present worked upon he would endeavour to demonstrate to the meeting, so that they might form an estimate of the prospective results; and, at the same time, expressed himself ready to answer any inquiry, and to afford the fullest information, on any matter appertaining to the mine, having taken, as he believed, an accurate survey, and personally inspected the workings. From the statement submitted by the chairman, it appeared, that an adit level had been driven 130 fms., which had intersected the lode at 16 fms. deep; and that a cross-cut had been driven to take the parallel lode, and that the lodes show to open day—a deep ravine passing the eastern boundary, where the lode is large, and holding down—the Esgar-galed lode not being worked except for trial—the Delife lode now in actual operation, yielding a great profit. On the surface, to the western boundary of the estate, the same lodes are now working by another company with great success—the Esgar-galed extends upwards of 900 yards, being 50 to 60 ft. big; and the Delife 1200 yards, from 5 to 9 ft. big. There is erected a water-wheel, of 40 ft. diameter, capable of working the pumps, the crushing-mill, washing the ores, workshop for smith, carpenters, &c.; also, a house for the manager. The adit level has been driven 150 fms., and an engine-shaft has been sunk 16 fms, and a level driven on level course of the lode. Another shaft has been sunk 22 fms., and a level driven.

A report from Capt. Edward Davies, the manager, of the Rhoswhwyddol Lead Mines, which are in the immediate locality, was then read—from which it appeared that, during the past six months, little or no advance had been made as to discoveries, or new ore ground being opened. The adit level had been driven 130 fms., and the engine-shaft sunk to a depth of 16 fms.—the level at which point had been driven about 60 fms. east, and 14 fms. west—the lode being from 5 to 9 ft. big, of orey ground, nearly the whole distance driven, varying in value from 10*l.* to 20*l.* per fm. A winze had been sunk 6 fms. below the 16 fm. level, and another level driven about 40 fms. east, and 65 fms. west, where some good orey ground has been met with. It is the opinion of Capt. Davies, as expressed in his report, that these levels alone will yield from 15 to 20 tons of lead monthly. It appears that the lead is intermixed with black jack, or blende, which is readily saleable; and, having to be brought to surface as attle, or deads, will well repay the cost of raising—the price being 40*s.* to 45*s.* per ton. The quantity raised may be estimated at 25 to 30 per cent. more than the lead—the assay of which latter is about 77 to 78 per cent. The Esgar-galed lode seems not to have been worked upon, although in the immediately adjoining sett (that of Messrs. Williams and Pugh) upwards of 50,000*l.* worth of lead has been extracted in the past few years. It is proposed to sink the engine-shaft 30 fms., to drive the adit level, or cross-cut, to the Esgar-galed lode, and to prosecute the 22 fm. level further west—the cost attendant which several workings may be estimated at about 100*l.* per month, which, added to the ordinary course of working, would make a monthly cost of—say, 250*l.* Capt. D. observes, however, that there are other parts of the sett which he considers well deserving of trial, and which, if carried out, would necessarily enhance the cost. The entire capital required for prosecuting the mine, he considered, might be assumed at 5000*l.*—at the same time, that any discoveries made might not only reduce the cost, but accelerate the periods when returns would be made.

Mr. PROSSER submitted to the meeting the propriety of, and advantages attending, the issue and disposal of 500 shares—being one-sixth of the number of which the company was constituted—such shares being issued at the rate of 1*l.* per share in the way of deposit, and a monthly instalment of 10*s.* per share, until the sum of 10*l.* per share should have been paid in full—the remaining 2500 shares being retained, or appropriated, to the present adventurers in full payment for their expenditure, the machinery, materials, &c.—it being, moreover, understood that the money so subscribed, or arising from the disposal of the 500 shares, should be applied to the working of the mine, and carrying out the objects of the company.

The question having been discussed, and a general conversation having ensued, as regards the prospects presented by the mine—the result of which was deemed satisfactory—and the usual thanks having been passed to the chairman, the meeting separated.

SOUTH WHEAL TOLGUS MINING COMPANY.

At a meeting of adventurers, held at the mine, on Thursday, the 10th ult., the accounts were examined and passed, showing—Labour cost and merchants' bills for six months, to end of December, 269*l.* 19s. 9d.—By balance from last account, 192*l.* 6s. 6d.; call of 5*l.* per share, made August 2, 1280*l.*; ores sold (less dues), 790*l.* 18s. 5d.=2268*l.* 4s. 11d.—leaving balance against the mine of 431*l.* 14s. 10d. It was resolved, that a call of 50s. per share be made, payable on or before the end of February; also, that Captain Francis having opened an account at the bank of Messrs. Tweedy, Williams, and Co., Redruth, such step is approved of and confirmed. The salary of Capt. Goldsworthy was increased from 5*l.* 5s. to 6*l.* 6s. per month, from the 1st of January. The following report from Capt. Francis was read to the meeting:—

In accordance with the resolution of the adventurers, passed at the meeting in August last, steam-engine, of 42-inch cylinder, has been erected and set to work on the new shaft, which was then commenced sinking. This shaft, now called Michell's engine-shaft, is sunk 7½ fms. below the adit, and we expect to get it deep enough for a 12 fm. level in six weeks. The cross-cut to the lode, in that level, will be about 12 fms., and it will require about two months to drive it. For the purpose of making the ore ground under the adit available for returns, more readily than if we were to wait for the intersection of the lode in the 12 fm. level, from the engine-shaft, a winze is sinking on the lode, immediately south of the shaft, the water in which is drawn by a small lift of pumps, worked by a chain through the cross-cut in the adit level, and connected to the rods at the engine-shaft; this winze is down between 7 and 8 fms. from the adit, and will be deep enough for a 12 fm. level in about five weeks. It is further east than any of the ore ground in the adit, and the lode in it, at first, was poor; it then yielded full 2 tons of ore per fm. for about 4 fms., but to day it is small again, and without much ore. There is every reason to believe that the unproductive state of the winze, at this time, is only temporary, and that the lode in it will shortly improve again. We shall immediately drive east and west after it is sunk to the required depth; and, as we expect to drain most of the ground below the adit soon afterwards, we look forward to getting returns from this quarter in the course of about two months. Very little has been done at the adit since August last, but we shall now carry out the trial of the eastern ground expeditiously by extending that level into it. Our expenditure in the erection of the engine, and about other new works, has somewhat exceeded the estimate; whilst, as yet, we have had no assistance from the ore ground below the adit. These circumstances, together, have left a balance against the adventurers, to the end of the past year, of 431*l.* 14s. 10d.; and, as it has been shown that we do not reckon on getting much returns for the next two or three months, it will be necessary to make provisions to day for meeting a part of the costs for that period. It is satisfactory to observe, that every charge that has been incurred in connection with the purchase and erection of the engine, is included in the cost for December. It will be seen that the means which are now being used will enable us to lay open the mine rapidly; and should the lode be found as productive below the adit as its appearance in that level leads us to expect, a moderate period will be sufficient for us to place the mine in a profitable state.

SOUTHERN AND WESTERN MINING COMPANY OF IRELAND.

The first annual meeting of the proprietors in this undertaking is advertised to be held on Monday next, the 6th inst. We have been favoured with a copy of the report which will be submitted at the meeting, as follows:—

REPORT.

The directors of the Southern and Western Mining Company of Ireland, in submitting to the shareholders their first report, feel gratified at being able to announce the favourable position which the company has already attained. Formed in the year 1846, when they became the purchasers of the Gurtavallig Mine, situated on the south shore of Bantry Bay, a Charter of Incorporation was obtained in the spring of the following year, and already have not only all the laborious preliminary operations been satisfactorily concluded, but a cargo of ore is about to be shipped for Swansea. The expenses attendant upon the obtainment of the charter have necessarily been heavy; but when it is recollected that this protection secures the shareholders from all demands exceeding the amount of their subscriptions—placing them beyond the reach of the Joint-Stock Company's Act—and that the expense is a first outlay, having a permanent and most beneficial effect upon the undertaking—it will be admitted that the cost of the charter—a privilege which has not been conceded to any other mining company in Ireland—has been wisely incurred. With few exceptions, the deposit and call have been paid with regularity, and the company may boast of possessing a respectable and wealthy constituency. From the great extent and dimensions of the lodes which have been already explored, the good quality of the deposits, and the facility for removing, preparing, and shipping the ore for market, the future operations of the mine will be attended with comparatively small expenditure; and there is every reason to suppose that no call will be made which can at all prove inconvenient to the general body of shareholders. The directors, however, confidently rely upon the support of the shareholders in the event of assistance being required to carry on the works, and feel satisfied that the accompanying report of their able and indefatigable superintendent, will justify the expectations which they confidently entertain of eventually realising a valuable property from the Gurtavallig Mine.

In the report from Mr. W. Thomas, which will also be laid before the meeting, he says, "In the shallow adit we have driven 104 fms. 5 ft.; there are several large lodes, varying from 12 to 20 ft. in breadth, and have just commenced a cross-cut for intersecting them. The shallow adit west is driven 46 fms. 4 ft. 6 in.; the lode is from 4 to 10 ft. wide, composed of gossan, quartz, red and black oxide, carbonate of copper, and yellow copper ore. In the deep adit level west we have explored on the course of the lode 50 fms. 4 ft. 3 in.; it is from 20 to 24 ft. wide, and the level being driven on one part of it, we have now commenced cross-cutting north and south, to ascertain its size and value, and to intersect two large parallel lodes, within a distance of 6 fms., as also the great caunter lode. In two winzes, or internal shafts, sunk from the shallow to the deep adit level, the lode is composed of beautiful gossan, with rich oxides and carbonates of copper and yellow ore. We have sunk 6 fms. below the deep adit through a very fine lode. The total length of the shallow level is 151 fms. 3 ft. 6 in., and of the deep adit, 129 fms. 5 ft. 1 in. In each of the ends, irrespective of the intermediate space, the lode is strong, well defined, and contains good ore. Although our operations have been hitherto completely of an exploratory character, I consider, from the nature and appearance of the lodes laid open, that our prospects are highly encouraging and decidedly good; in fact, if our hopes of success depended upon one of the lodes alone, I consider that either of them would, in the judgment of any practical miner, be deemed worthy of any amount of outlay in its development—more particularly when the great natural advantages and facilities which we possess for working are taken into account. Our prospects of success are not, however, confined to one, two, or even three lodes, and those neither small nor insignificant. We know that we have three champion lodes, only a few fathoms north of the deep adit west. We know, also, that we shall shortly intersect the same lodes by the cross-cut south, from the deep adit end east; for notwithstanding all that we have done, we have only now arrived at the proper position to lay open and develope the resources of the mine. Our cross-cuts, north and south, will shortly accomplish this; and if there is any dependence to be placed on appearances and indications, which assuredly is the case, I do not hesitate to say that we are, in addition to the present remarkable development, on the eve of making important and valuable discoveries. We have a mine between 60 and 70 fms. deep, which may be worked 100 years in that level, without incurring one farthing expense for water charge. The water is all drained from the mine by the deep adit level, which also is the great thoroughfare—a railroad having been laid down in it, for bringing out the ore. Not a single article has to be drawn to the surface, our workings being so arranged, that all the stuff falls down to the deep level, from whence it is trammed out, and prepared on the spot for market. We have made convenient and complete dressing floors on a spot that had been for ages exposed to the fury of the Western Ocean; the same is secured by two immense piers or sea walls, inside of which are erected smiths' and carpenters' shops, dressing houses, &c. We have cut a road in the solid rock for shipping the ore and loading materials, made water-courses, and built a large reservoir, which commands the dressing floors, explored in shafts, levels, winzes, &c., 475 fms. 0 ft. 6 in. of ground, laid open some valuable lodes; and, during the last four months, notwithstanding short and wet days, and labouring under many disadvantages which are now removed, dressed and prepared for market, from a mine completely in its infancy, upwards of 60 tons of ore, that will yield from 10 to 12 per cent. of copper, with a prospect of a regular succession of shipments. These are a few of the things we have done, with an outlay, including all kinds of materials, agencies, &c., of less than 3000*l.*

From the accounts, it appears that there has been received on calls 24,550*l.*; from the proprietors of Gurtavallig Mine, 1000*l.*; interest, 37*l.* 17s. 8d.=25,587*l.* 17s. 8d.;—and, expended for the Gurtavallig Mine, 7931 shares, with 50s. paid, 19,827*l.* 10s.; labour and materials at the mine, 2880*l.* 15s.; law expenses in obtaining Charter of Incorporation, lease of mine, &c., 1764*l.* 17s. 9d.; leaving cash balance in Provincial Bank, 1114*l.* 14s. 11d.=25,587*l.* 17s. 8d.

CRADDOCK MOOR.—At a meeting of adventurers, held at Liskeard, on the 18th Feb., the accounts were examined and passed, showing—Labour cost for Nov. and Dec., 108*l.* 4s. 6d.; merchants' bills, 46*l.* 4s. 9d. = 154*l.* 9s. 3d.—By balance at last account, 17*l.* 17s. 6d.; call, 120*l.*: leaving balance against the adventurers of 16*l.* 11s. 9d.—A call of 15s. per share was made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The following report from Capt. Taylor was read:—"Since our last report, we have sunk the shaft rather more than 3 fms.—it is now about 45 fms. deep; the lode in it is of just the same character as when last reported, composed of peach, fluor, and black and yellow ore; its dip is nearly perpendicular, but with an almost imperceptible inclination south. We are now at about that depth where I have hitherto recommended driving; and I now beg to repeat that recommendation, to try the lode, and to ascertain whether there be a cross-course near, which will furnish facilities for exploring the other parallel lodes."

DARTMOOR CONSOLS.—A meeting of shareholders was held at the White Hart Inn, Coggeshall, on Monday the 21st Feb.—JOHN MATHEW, Esq., in the chair.—The following resolutions were proposed and passed:—"That, from the great difficulties which surround this company, and the burdensome debt due from the company, the further prosecution of this mine be abandoned."—"That a call of 1*l.* per share be forthwith made, to discharge the liabilities of the company."—[Since the above meeting, we are advised that arrangements have been made by some of the shareholders, to the exclusion of others, for the further effectual working of the mine, and that terms have been made with the proprietors of the sett. If such be the case, we think that this pre-arranged, matter should have been brought before the meeting, and an opportunity afforded the unfortunate shareholders the option of continuing the adventure.]

GONAMENA.—At a meeting of adventurers, held at Liskeard, on the 18th of February, the accounts were examined and passed, showing—By balance of last account, 44*l.* 17s. 4d.; sale of copper ore, 340*l.* 8s. 3d.; call, 256*l.*—together, 641*l.* 5s. 7d.—Labour cost for Nov. and Dec., 318*l.* 1s. 11d.; merchants' bills, 133*l.* 16s. 4d.; dues, 21*l.* 8s. 11d.: leaving balance in favour of adventurers, 167*l.* 18s. 5d.—A call of 20s. per share was made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The following report from Capt. Buzza was read:—"In the 34 fm. level east, on the north lode, the lode is 18 in. big, composed of peach and spar, spangled with ore. In the 45 east, on the north lode, the lode is 6 in. big, composed of peach and spar, intermixed with ore; this end is not yet driven under the bunch of ore in the 34; in the 45 west the lode is 18 in. big, composed of peach, spar, and mundic; the engine-shaft is sunk under the 45 fathom level 11 fathoms. We are preparing to divide and case down the shaft, and cut a plat in the 55. We have 10 tons of ore ready for sampling."

HERODSCOMBE.—At a meeting of shareholders, held at the counting-house on Herodsfoot Mine, on Monday last, the purser's accounts to end of December—showing balance against the mine of 742*l.* 15s. 4½d.—were examined and allowed, a call of 1*l.* per share made, and the following resolution passed:—"That the resignation of parties holding shares on which the last call has been paid, amounting to 44 shares, be accepted; and that the balance of the value of the materials, if any, and when it shall be ascertained, be paid to the parties resigning, after deducting the proportionate share of the debts and liabilities up to the respective times of resignation—that the merchants be requested to apply to those in arrear for calls for payment of their respective arrears; and that the purser be instructed to take legal proceedings, if necessary—and that a meeting be called in about a month or six weeks, to determine on the propriety of abandoning the mine, or of proceeding with vigour."—The following report, from Capt. H. Medlen, was read to the meeting:—"Since our last report, the 12 fm. level has been driven south 22 fms., where the lode has been small and poor; this level has been driven north 17 fms., where the lode is small and poor also; we have put a rise from the 12 fm. level to the adit level, where the lode in the adit level is large and promising—we found it kindly, but poor; the engine-shaft is sunk about 10 fms. below the 12 fm. level, where we intend to drive and cut the lode, which we expect to do in about three weeks. We have 4½ tons of ore dressed, and about 4½ tons to dress. The sampreen, and two men on tribute, are all the miners we have now employed."

HERODSFOOT.—At a meeting of shareholders, held at the mine, on Monday last, the accounts to the end of Dec.—showing balance against the mine of 269*l.* 7s. 1d.—were examined and allowed; a call of 2*l.* per share made; and resolved, that an engine for winding, of 20 in. cylinder, be immediately procured, according to Messrs. Hocking and Loam's specification. The following report, from Captain J. Medlen, was read to the meeting:—"Since our last report, the engine-shaft has been sunk to the 94 fm. level; a cross-cut driven 5 fms.; and the lode cut through, where it is 1½ ft. wide, producing ½ ton of lead per fm. The 82 fm. level is driven north 20 fms.; the lode in this end is 10 in. wide, producing ¾ ton per fm. The 72 fm. level is driven north 16 fms.; the lode is 1 ft. wide, producing nearly 1 ton per fm. The 62 fm. level is driven north 10 fms.; the lode is 1 ft. wide, producing ½ ton per fm. The 82 fm. level is driven south 26 fms.; the lode in this end is 2 ft. wide, producing good stones of ore. The 72 fm. level is driven south 15 fms., where the lode is divided into two parts; the eastern part is 1½ ft. wide, producing one-third of a ton per fm.; the western part is 2 ft. wide—rather poor; the horse between these two parts of the lode is 6 ft. wide; it is thought that, in driving about 8 or 10 fms., these parts will again form a junction, where we may reasonably expect a favourable change. The 52 fm. level is driven south 12 fms.; the lode is small and poor;—this end is suspended. The engine-shaft is 8 ft. below the 94 fms. level, and we are now sinking for another level. Windsor shaft is sunk 11 fms. below the 14 fm. level; it has been stopped three months, owing to an increase of surface water. I would recommend the sinking of this shaft again as soon as the season will admit of it. We have 10 tribute pitches working, at an average tribute of 3*l.* per ton. We are returning 50 tons of ore per month at present, and expect to return 70 tons per month as soon as we have a more powerful machine for drawing. We sampled January ores, 50 tons, on Saturday last." The accounts included, as received for sales of lead ore, Combmartin Company, 840*l.*; B. Somers and Co., 1*l.* 3s. 4d.; Walker, Parker, and Co., 1151*l.* 5s. 0d.

PLYMOUTH WHEAL YEOLAND.—A special meeting of adventurers was held on Monday, the 28th Feb., when it was resolved—"That in order to clear off all liabilities of the mine, a call of 6*l.* per share be made, payable by instalments—viz.: 2*l.* March 4, 2*l.* April 1, 1*l.* June 1, and 1*l.* Aug. 1 next." Reports of the committee and Capt. Edwards were read. Capt. Edwards stated, that "but little had been done in either of the adit levels since the last meeting, the men having been employed in assisting in the erection of the engine and buildings. The 12 fm. level, west from the engine-shaft, has been driven 7 fms.; throughout the whole of this the lode has been very good, particularly in the bottom of the level; the level has not been so good during the last few days, but has again improved; the 12 fm. level, east of the shaft, has been driven 4½ fms. through a good lode; this end has passed through a small piece of the lode, which has not been very productive, but is now much improved; from the east to the west end of this level is about 14 fms.—the whole of which, with the exception of about 8 ft., has been very good. Preparations have been made for sinking the engine-shaft below this level, and we hope to commence this work next week. The engine and stamps are now in full operation, and the machinery works exceedingly well. Every succeeding operation in the mine has tended to confirm my opinion of the value of this undertaking; and, judging from what we have already seen, I have no hesitation in expressing my firm opinion, that this will make a large and very profitable mine; indeed, I have never seen an undertaking, which, with so small an outlay, presents such cheering prospects as this does to the adventurers." The report of the committee stated, that their object in calling the meeting, was to lay before the adventurers a statement of the liabilities of the mine—the whole of which, with the exception of a small amount, has been incurred in connection with the engine and stamps (just completed and set to work)—and to consider the best means to be adopted for their discharge. It appears from the statement, that the amount of debt now owing is, in round numbers, 2700*l.*; to this must be added February cost, estimated at 280*l.*—making together 2980*l.* A portion of this—viz., 1146*l.*, for the engine and stamps—has, in accordance with an arrangement made with Mr. Mare, been met by bills. In addition to this sum of 2980*l.*, provision should be made for March cost, estimated at 280*l.*—thus making a total of 3260*l.* As a set off to this, the purser has, either in cash or arrears of calls, about 300*l.*, which will leave a balance against the adventurers of 2960*l.* According to Capt. Edwards's information, there cannot be the slightest doubt of the mine yielding a profit to the adventurers. In the opinion of the committee, regard being had to the interest of the adventurers, it will be most advisable to discharge the whole of the liabilities with as little delay as possible; and, with this view, the committee have resolved to recommend the adventurers to make a call of 6*l.* per share. It is necessary that these payments should be met promptly, particularly the first—as in addition to the bill for 300*l.*, which will be due this week, a sum of money will be required for subsist on Saturday; and the greatest portions of the bills ought to be discharged at once, and thus place the mine in a sound position, and give the adventurers the benefit of the large discount usually allowed in such cases. This recommendation of the committee is the result of much and anxious deliberation, and the course pointed out is considered to be the best that can be adopted for the interest of the adventurers generally; and, if carried out to its full extent, the adventurers will be possessed of a most valuable property, free from debt, making large returns, which, from present appearances, can, within a short period, be very much increased.

TOKENBURY.—At a meeting of adventurers, held at Liskeard, on the 18th of February, the accounts were examined and passed, showing—Balance from last account, 87*l.* 4s. 5d.; labour cost for two months, 252*l.* 7s. 8d.; merchants' bills, 107*l.* 12s. 10s.; on account of materials, &c., on 28 relinquished shares, 100*l.*=547*l.* 4s. 11d.—By call, 282*l.*: leaving balance against the adventurers, 265*l.* 4s. 11d.—A call of 4*l.* per share was made on 62 shares—32 having been relinquished; and it was resolved that, in consequence of the number of shares relinquished, the mine be suspended for the present; and that a special meeting be called to consider the resumption of the working; in the meantime, an experienced agent be employed to examine and report on the mine.—The following report of Capt. Trelease was read:—"At present, we have two men employed in the 65 fm. level, south of Crouch's shaft, exploring on the eastern side of the lately-discovered cross-course, in search of the new lode that was found to exist between Browning's cross-course and the above cross-course. We have driven in a north and south direction about 9 fms.; and, at present, there appears to be some symptoms of a lode being near at hand in the north end; in the same level (65), the D lode is extended on west from Browning's cross-course about 28 fms.—the width of the same in present end, 3 ft., consisting chiefly of quartz and mundic, spotted with ores; six men are employed in this end; also in this level (65), there are four men employed in driving east of Browning's cross-course, on E three lode; in this end, the lode at present is small, but the kindly indications it shows in the level over, a few fathoms beyond the 65 end, are a sufficient inducement to continue driving this level with the same number of hands. The 55 fathom level is driven east of Browning's cross-course more than 30 fms., and within 15 fms. of intersecting Messer's (the new) cross-course—the width of the lode in the present end is about 18 in., chiefly mundic, mixed with ores; and, from the appearances of this lode, especially in the last 12 or 14 fms. driving, there is much reason to imagine that it will eventually turn out to be a productive one. The 65 is now about 22 fms. behind this end, and will, in its progress eastward, pass through this kindly channel—which scarcely leaves a doubt, from the ores in the level over, of its being productive and laying open tribute ground. We have four pitches at work, and about 20 tons of copper ores at surface."

WEST CARADON.—At a meeting of adventurers, held at Liskeard, on the 17th Feb., the accounts were examined and passed, showing—Balance from last account, 1289*l.* 9s. 7d.; ores sold (less dues), 3269*l.* 5s. 2d.; materials sold, 19*l.* 5s. 7d. = 4578*l.* 0s. 4d.—By labour cost for Nov. and Dec., 2539*l.* 2s.; merchants' bills, 915*l.* 15s. 2d.; interest and commission, 106*l.* 13s.=3561*l.* 10s. 2d.: leaving balance in favour of adventurers of 1016*l.* 10s. 2d.—It was then resolved—"That the adventurers, not present at this meeting, be informed, that the apparent loss for the two months, the accounts of which are now passed, arises from the detention, by a breakage on the canal, of a parcel of our ore, which caused the sale in the first month to be considerably less than usual."—"That the purchase money of the new shares in the Liskeard and Caradon Railway—viz., 625*l.*—as per resolution of last meeting, be charged in the cost-book, their division amongst the adventurers being deferred for the present."

WHEAL MARY CONSOLS.—At a meeting of adventurers, held at Liskeard on the 17th ult., the accounts were examined and passed, showing:—Balance of last account, 374*l.* 19s. 6d.; labour cost for Nov. and Dec., 1312*l.* 18s. 6d.; merchants' bills, 452*l.*; dues, 67*l.* 6s. 6d.—2207*l.* 4s. 6d.—By copper ore sold, 311*l.* 7s.; tin ditto, 892*l.* 15s. 5d.; materials sold, 44*l.* 4s. 3d.; calls, 512*l.*: leaving balance against the adventurers, 446*l.* 17s. 10d.—A call of 3*l.* per share was made, payable immediately to the Devon and Cornwall Bank, Liskeard.—The following report, from Captain Nance, was read:—"We have sunk 7 fms. under the 80 fm. level, and find the lode in the bottom small and poor. The men are now employed driving west at the bottom of the shaft, to come under where the lode was found most productive in the 80 level, being 3 fms. to the west of the shaft. If the ore should not be found to hold down, of course this place will be suspended. The south copper lode, in the 50 west, is 3 to 4 ft. big, containing a branch of ore 1 ft. wide. In the eastern end, the lode is 3 ft. big, yielding a small portion of ore. We have 3 pitches in the back of this level, at 10s., 10s., and 9s., in 1*l.* Should the improvement in the western end continue, we shall, in a short time, be able to increase our returns of copper ore. We have intersected two lodes in the 70 cross-cut north, 2 ft. and 1 ft. wide—both poor. We are still driving this cross-cut, to intersect a large lode

further north, which we cut in the 25 above it, where it contains a portion of tin. The shallow adit, to drain off the water from the tin lode, is now connected with the lode 11 fathoms deep from surface; and the driving the 35 ends, and sinking, are again resumed—also three pitches in the back of the 35, at 3s., 3s., and 4s. in 1*l*. The lode in both ends, in the 35, is large, and coarse in quality. The shaft is down now 7½ fms. below the 35, and we expect to complete it to the 45, and intersect the lode, within two months from this time. We hope also to cut, within two months, the tin lode in the cross-cut driving from the engine-shaft, 100 fms. west of the present tin working. Since the last meeting, we cut a small lode in this cross-cut, composed of copper ore and mundic. The 25 fms. level, on the tin lode, being now extended nearly to the boundary of Wheal Sisters sett, and the 60 fm. level in Wheal Sisters being driven to within 6 ft. of Wheal Mary Consols sett, it would be to the advantage of both companies if they could come to a mutual arrangement to drive the said levels into their respective setts, accommodating each other by allowing the discharge of the stuff through each other's mine.—P.S. The branch in the western end, at the 50 south lode, is much improved. It is now 18 in wide, very good. The eastern end is also looking better."

WHEAL SISTERS.—At a meeting of adventurers, held at Liskeard, on the 17th Feb., the accounts were examined and passed, showing—Balance of last account, 24*l*. 0s. 1d.; sale of copper ore, 832*l*. 1s. 10d.; calls, 256*l*. = 1112*l*. 1s. 11d. —By labour cost for Nov. and Dec., 744*l*. 5s. 11d.; materials, 205*l*. 3s. 11d.; lord's dues, 51*l*. 1s. 4d.: leaving balance in favour of adventurers, 111*l*. 10s. 9d. —A call of 20s. per share was made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The following report of Capt. Nance was read:—"The 60 fm. level is now driven to within 6 ft. of the boundary of Wheal Mary Consols sett; 4 fms. behind this end we have a bunch of ore, worth 15*l*. per fm.; there is a winze sinking in the bottom of this level by nine men, about midway between the eastern and western bunch of ore; we purpose to sink it 10 fms. (or 5 fms. deeper), and then drive east and west under the said ore ground, as this can be accomplished in much less time than the 70 could be driven to reach it from the shaft, it being 50 fms. to come under the eastern, and 80 fms. to the western bunch. The 50 cross-cut, driving south, towards Wheal Mary copper lode, is now extended 4½ fms., leaving about 4 fms. more to drive to reach it; we commenced this cross-cut from a point in the 50, where we had the best bunch of ore, hoping also to find a parallel bunch. The 30 cross-cut, driving towards the tin lode, is progressing satisfactorily; but the ground in the 40 cross-cut, driving towards the same lode, is rather harder. We have discovered a promising copper lode in the north part of the sett, not far from the junction of killas and granite—it is 3 to 4 ft. wide, composed of capel, prian, and mundic, with stones of yellow ore, at 9 or 10 fms. deep from surface. The deep adit is driven north to within 10 fms. of this lode, and would intersect it 30 fms. deep. The ground in the adit end is favourable for driving, and the lode could be intersected for 30*l*. or 40*l*. at most, including all charges. As Wheal Mary adventurers have driven their 25 fm. level on the tin lode to Wheal Sisters boundary, it would be advisable to try to arrange with them to allow us to drive the said level into Wheal Sisters sett. This might be a great acquisition to the concern. Our next two-months' sale of ore will be 110 tons."

BALLESWIDDEN.—At a meeting of adventurers, held on the mine, on the 24th November, the accounts were examined and passed, showing—Tin sold, 4678*l*. 2s. 10d.; by labour cost for Nov. and Dec., 3215*l*. 10s. 2d.; bills, 1274*l*. 1s.; dues, 131*l*. 5s. 2d.; 12 months' rent, 33*l*. 5s.: leaving profit on the two months, 24*l*. 1s. 6d.—On the profit and loss account the adventurers are—Debtor, 867*l*. 17s. 4d.; and creditor, 542*l* 15s. 2d.: leaving a balance against them of 325*l*. 2s. 2d.—It was resolved, that in consequence of a further reduction in the price of tin, the purser be requested to convene a special meeting of adventurers on the mine, on Tuesday, the 28th March next, to consider the propriety of suspending all working of the mine from that date, or any other course, to be there and then adopted.

ST. AUSTELL CONSOLS.—At a special general meeting of adventurers, held at the New Inn, Tywardreath, on the 22d of February, the accounts were examined and passed, showing labour cost for six months, to 31st December, 1847, 426*l*. 5s. 8d.—By calls, 243*l*.; ores sold, 125*l*. 14s. 9d.—leaving balance against the mine, 57*l*. 10s. 11d.—It was then resolved, that a call of 1*l*. per share be made payable forthwith; that the purser do exercise his own discretion in expunging from the list of adventurers the names of those who are in arrear of calls, or of suing them in the County Court; and that any adventurer can have a copy of the accounts in detail, by forwarding 5s. for the expense of a clerk to copy them.

LA JAHOTTIERE IRON-WORKS.—A general meeting of shareholders was held yesterday, at the offices of Mr. Tatham, Throgmorton-street—when, after some deliberation, and, looking at the unsettled state of things in France, it was considered advisable to suspend operations—under the expectation, however, that the works would be prosecuted by a local company.

GALVANIZED IRON COMPANY.—In the House of Commons, on Wednesday evening, Mr. Cobbold moved, pursuant to notice, that the petition of H. Patteson, Esq., praying to be heard by counsel against the Patent Galvanized Iron Company, trading under the style or firm of "Malins and Rawlinsons" Bill, be referred to the committee on the bill. Also, that the petition of H. Patteson, Esq., praying to be heard by counsel against the Patent Galvanized Iron Company (Incorporation of Company, with Powers to hold Lands, to raise Money by Loan, and to Purchase Letters Patent) Bill, be referred to the committee on the bill.—Agreed to.

DARTMOOR CONSOLS.—A correspondent mentions, that a perfect revolution has taken place with respect to the affairs of this mine. The whole of the members of the administration, under the premiership of W. Beard, Esq., have resigned, and a provisional executive is now in course of formation, under the presidency of Ephraim Overall Evans, Esq. The reason for this sudden change of events is not mentioned. A meeting of shareholders is to be held forthwith, at the London Tavern.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

ANTIMONY AND SILVER-LEAD MINES.—The above mines are situate on the estates called Tregear and Trewicket, in the parish of St. Kew, Cornwall, and are about 800 fms. in length and 600 fms. in width, bounded on the north by Wheal Sarah Mine (the lodes of which run through this sett), and on the south by the road leading from the mine to the shipping port, which is distant about two miles. At Port Gavern the company proposes to erect a smelting establishment, for refining the antimony ores. A piece of ground has been taken for the erection of the necessary buildings, at a small rent, and the services of an eminent smelter in the neighbourhood secured. There are three antimony lodes in the sett, varying from two to five feet big, and from which has been raised several tons of antimony ore, producing from 60 to 75 per cent., specimens of which can be seen at the offices of the company, Lombard-street. The lode of ore in sight is upwards of five feet big. There are also four silver-lead lodes, including Wheal Sarah lodes. The antimony ore, in its present state, is worth 14*l*. per ton, and 40*l*. per ton when smelted. The silver-lead ores produce for silver 20*l*. per ton, from sample raised from one of the lodes. The present rate of carriage is 2s. per ton from the mine to the sea-port, where it can be shipped for London at 12s. per ton, Bristol at 6s. 6d. per ton, and Swansea at 4s. 6d. Coals are cheap, and the expenses of smelting reasonable. The sett is held on lease for 21 years, from Jan., 1848, at 1-12th dues.

CONDURROW maintains her position, or rather has advanced a step—the 10 fm. level end, on the north lode, having improved so much as to be nearly as productive as ever. The course of ore in the 30 end continues good. The 60 bottom end east is of a highly encouraging character.

DEVON GREAT CONSOLS.—At Wheal Fanny the improvement continues. In the 25 fm. level, western shaft, they have a splendid course of ore 8 ft. wide; no north or south wall as yet, and producing 25 tons per fm., worth about 6*l*. per ton. At Wheal Josiah, in sinking Hitchen's shaft 9 ft., 46 tons of dressed ores of good quality have been produced, worth about 7*l*. per ton, which makes the lode worth 210*l*. per fm.

GREAT MICHELL CONSOLS.—Since the receipt of your favour of the 22d, I have been over to the mine, and examined the lode in the bottom of the winze. I was very much pleased indeed to see it, being at this moment very productive; about 3 ft. have been sunk since the discovery, and have yielded 6 tons of ore, worth about 6*l*. per ton; therefore, the present bottom of the winze may be considered to be worth about 70*l*. per fm. In my opinion, perseverance is the only thing wanting to make this concern productive and profitable.

NORTH ROSKEAR, on the whole, is looking a shade better, and some transactions have been effected in the county.

NEW PATENTS.

E. Wallace, spinster, Laurel-lodge, Cheltenham, Gloucester, for certain improvements in facing, figuring, designating, decorating, planning, and otherwise fitting-up houses and other buildings, parts of which are applicable to articles of furniture.

J. C. Roberts, Holywell, Flintshire, surgeon, for a simplified and improved mode of communicating intelligence by means of electricity and magnetism, combined or not with steam, on railways between the carriages on the line and the engine or tender, so that the guards and passengers may give notice to the engineer, or engine driver, for the prevention of accidents or casualties, or the mitigation of the evils thereof, and the protection of human life and property from loss or injury, and also of communicating signals by the same agency, describing the cause or causes of alarm; and a new mode of securing the passage of electricity for the above purposes to be substituted or not for the side chains, and of communicating intelligence between distant places on the line.

W. Palmer, Sutton-street, Clerkenwell, for improvements in melting fats and in the manufacture of candles.

C. Ritchie, Aberdeen, Scotland, engineer, for certain improvements in locomotive and other engines.—*Mechanics' Magazine.*

AMERICAN GENIUS.—The last invention patented in the United States is said to be the "Patent Æolian Boot Jack," which delicate machine is so constructed that it pulls off boots, mends holes in stockings, cuts corns and toe-nails, cures chilblains, and kicks the first rascal that offends the owner, accompanying its various operations with the sentimental melody of "Clar de kitchen."

ST. JOHN DEL REY MINING COMPANY.

SIR,—Observing in your Journal of Saturday last a paragraph respecting the above company, stating that they were in a most deplorable position; that the slaves were in a state of revolt, from the constant floggings and illusage that they receive; and that several have been punished with such severity, as to be unable to work for weeks together. I have made the most diligent inquiries as to the truth of these allegations, and am sorry to say, as regards the treatment of the slaves, the statement is too true. It is really a serious charge against the directors and English shareholders of the company. For what purpose, I would ask, do we, at great annual cost, and the risk of the lives of valuable officers and crews, keep up a squadron on the African coast for the prevention of the slave trade, when, in spite of this fact, and in the face of the laws of the realm, we find men, calling themselves Englishmen and christians, trading in human life on the Brazilian cost—employing slaves in working their mines, and illtreating them in the most brutal manner? And yet these men are looked upon as highly respectable parties, and have, probably, subscribed towards the abolition of that very slavery which they are doing every thing in their power to perpetuate! As an Englishman, a British subject, and a consistent individual, I call upon the directors and shareholders of the St. John del Rey Mining Company, either to admit the above statement to be correct, or at once indignantly to deny it. Why were twenty millions sterling paid to English proprietors in the West Indies, if British subjects are allowed to possess slaves, and treat them worse than brutes, in other lands? Is the income tax to be increased, to keep up a large naval force for the protection of the negro, when in the very heart of the empire the head offices of establishments exist which are conducted on the very principles of employing and dealing in slaves? Is foreign gold to be purchased at the sacrifice of English principle? Are the inhabitants of the African coasts to be torn from their homes, and disposed of as slaves to the subjects of England, for the purposes of mining in the Brazils? Or, if the mines cannot be worked without, had not such speculations better be abandoned?

Where are all the followers of the immortal Wilberforce? What is Lord Brougham about, who, in his place in the House of Lords, stated that any British subject being engaged, either directly or indirectly, in employing slaves, or supporting the system of slavery, was liable to an indictment? Are not the directors and shareholders individually and collectively liable, as British subjects, for carrying on slavery in the Brazils? Before I take further steps in this matter, I shall await another publication of your Journal, for the purpose of giving the directors of this company an opportunity of reply.

London, Feb. 21. ANTI-SLAVERY.

ST. JOHN DEL REY MINING COMPANY.

SIR,—I have read in your three last Journals communications relating to the St. John del Rey Mining Company, containing charges against the present management of its affairs in Brazil, too serious to be passed over without explanation by the directors. When charges of a general nature are made, one may be led to think that private feelings have undue influence upon the writer; but, in your last Number, it is broadly stated, that documentary evidence can be produced of the assertions made. Do the directors of the company admit the truth of the following charges?—1. That the head mine agent was promised a premium of 100*l*., if the produce of the mine reached 15,000 oitavas for three months consecutively.—2. That an overseer was promised a bribe by the head agent, to ensure these returns by over-working the people.—3. That the premium having been obtained by the head mine agent, the returns immediately fall off.—4. That the returns having fallen off, the superintendent, not satisfied with the plain and simple reason given by the reduction officer, removed him from the department he has filled satisfactorily for 10 years, upon which that officer resigned, and left the company's service.—5. That a person, filling an important office in their employ, was dismissed from a neighbouring company for unworthy conduct and intriguing.—6. That many English miners and mechanics have left the service of the company in disgust with the management, and others sent home for, to replace them. The directors of the St. John del Rey Company cannot but have the same interest in its success as the proprietors at large; and when accusations, such as the above, are brought against their representative abroad, they are bound to answer them. It is not sufficient to point to monthly profits of 2000*l*. as proof of everything being well conducted at the mines; a greater profit might be realised for some months successively by unfairly working the stopes, and the concern brought down suddenly from a dividend-paying to a losing speculation. Such things have happened ere now, and may happen again. A SHAREHOLDER.

London, March 1.

TO THE SHAREHOLDERS IN THE MENDIP HILLS MINE.

GENTLEMEN,—Our half-yearly meeting is called for the 10th of March. Like other budgets, that of the directors will, no doubt, show a deficiency, and we shall be called upon for more money. It will be for you to determine whether, as Cobden says, "the receipts shall be raised to meet the expenditure," or the future expenditure reduced. Upon the mines and the smelting-works less than 40 men are employed. Mr. Stainsby, in London, for writing an occasional dispatch to marshal this important army, receives 200*l*. per year; the directors meet once a month, and sign a cheque for the monthly cost, and receive 240*l*. a year—total London expenses, 440*l*. per year! Gentlemen and brother shareholders, I ask you, if you ever heard anything more monstrous than this? I ask you, if it be *possible* for any profits to be made for us whilst such expenses exist? We must not forget that the Mendip Hills Mines were originally purchased up by Mr. Stainsby at a trifling sum, compared to the 5000*l*. he charged us for them; and, after being the seller of the mines to the present company, he nominated himself manager, appoints directors from among his personal friends, charges these enormous salaries, and sets us at defiance. To pay these some 30 or 40 men their wages once a month, 60*l*. per annum is paid to a son of the lord of the mines. Could not the captain do this, and so save this 60*l*. a year! You must ask, too, to look at cost-sheets—look if items are charged for "travelling expenses" of these overpaid directors? Ask if it be not a fact, that in September last, one of the directors visited the mine, staid an hour, and charged 13*l*. for "travelling expenses?" In conclusion, Gentlemen, if you wish to rescue your property, and make it profitable to yourselves, you must thoroughly investigate your affairs. Stop the mine, confine your operations to smelting, and reduce to one-half the London expenses.

London, March 3.

WHEAL ANDERTON.

SIR,—I am exceedingly glad to see that the shareholders are beginning to bestir themselves in demanding their promised dividends. I beg to ask, what has become of all the tin? Who has had it? All I can say is, the shareholders have had their 10 years' patience exhausted, and I am afraid their tin into the bargain. No more calls will be responded to. A SHAREHOLDER.

Exeter, March 2.

WHEAL ANDERTON MINE.

SIR,—In noticing the letter of "A Shareholder," in your last week's Journal, perhaps the gentleman, who is, doubtless, known to you, will favour me with his address. I shall then know whether he is disposed to be just before generous (?), as I believe the adventurers would rather respond to calls than allow debts to remain unpaid, and to make dividends from the produce of the ores sold, by way of deception on the public, and to the prejudice of the mine and their own credit. The present prospects of the mine, which are honestly reported, and which any investigation will warrant, support me in stating, that we are not only doing well, with fair prospects before us, but that the course pursued is one of a legitimate nature, which I should be happy to see followed in other instances.—JAMES CARPENTER: *March* 1.

BEDFORD MINING COMPANY.

SIR,—Knowing your willingness to give information respecting mining property, I beg to inquire, through the medium of your Journal, what the directors of the Bedford Mine are about, with so much money in hand—and the reason why a dividend has not long before this been declared? Also, whether it is considered a scrip or a registered company?—likewise, can a scripholder take his dividend on his shares, or is he bound to register them before doing so?—A CONSTANT SUBSCRIBER: *March* 2.

WHEAL VINCENT.

SIR,—I am informed it is stated, that I am connected with Wheal Vincent. As an old subscriber and constant reader, will you, Sir, allow me to avail myself of your columns, to give unqualified contradiction to the assertion. I am not, I never have been, neither do I intend to be, directly, or indirectly, connected with the mine sett in question. It is a fact, that I sent competent persons to inspect the property, and went myself once; but when I found there was water-power only in the winter months, and that steam would be required to carry on operations during the remainder of the year, I never gave it another thought—especially as I was assured that the quality of the tin, and general prospects of the sett, would not warrant such an expenditure. I have since been informed, that it was on this ground the old company relinquished their laboura.

The origin of my going near the place was simply this:—On the 19th Jan. I received a letter from Mr. John Pearse, of Launceston, saying, "I enclose you a bill of mining materials, which may be worth your attention for Tin Vale." The company being desirous to get more crushing power at Tin Vale, to keep pace with the supply of tinstuff, I immediately desired Capt. Floyd to inspect the materials; and, in reply to a letter from me, Mr. Pearse, on the 22d January, stated—"I will sell the whole of the materials for 60*l*., which are advertised for sale by auction at Wheal Vincent, on the 28th inst." I then made an offer of 50*l*., and subsequently agreed, as I supposed, for 55*l*. However, a nominal sale went on, and the materials were bought in at 85*l*., at which price, "with 5 per cent. auction duty," they were offered to me, on the 12th February. Of course, I declined to have any thing to do with them. I now find they have been purchased for 60*l*.—whether with or without auction duty, I do not know—by Capt. John Spargo, for Mr. John Mayhew, of Coggeshall, for the purpose of being removed to Wheal Sarah.

I have not the honour of being personally acquainted with Mr. Mayhew. I do not believe I ever saw him; and until a few days ago, when Capt. Spargo introduced himself to me, I was also unacquainted with that gentleman.

I may take this opportunity of mentioning, for the information of the Tin Vale shareholders, that Capt. Spargo expressed himself in unqualified terms as to the merits of Capt. Floyd as an agent—in fact, he said there was no person in the mineral community more competent to give a sound opinion, or one on whose decision and knowledge in mining affairs he would so confidently rely.

Dorchester-place, Blandford-square, March 3. W. W. MANSELL.

SWANSEA DOCK COMPANY.—Notice is hereby given, that "A. C. HOWDEN" is not the SECRETARY or ASSISTANT SECRETARY of this company—he having been dismissed by the shareholders at a general meeting of the company, held on the 21st of October last; and that the advertisement inserted by him in the last Number of the *Cambrian* newspaper is entirely unauthorised; that the call referred to has been duly made by the lawful directors of the company; and that the shareholders are legally liable to the payment thereof, and are expected and required to pay the same.—Dated this 22d day of February, 1848.

By order of the board of directors, GEO. GRANT FRANCIS, Secretary.

Dock Office, Quay Parade, Swansea. 44

EXTENSIVE IRON-WORKS.—FOR SALE, BY PRIVATE BARGAIN, the BLAIR IRON-WORKS, belonging to the Ayrshire Iron Company, situated in the parish of Dairy, and county of Ayr.

These works, which have been recently erected at an immense cost, consist of two blowing-engines, five blast-furnaces, workmen's houses, steam-engines for working the minerals, together with utensils at the pits, furnaces, &c., all in working order, and capable of producing upwards of 35,000 tons of pig-iron per annum.

One of the blowing engines, high-pressure, estimated at 90-horse power, was erected in 1841; the other, a condensing engine, was erected in 1847, and is estimated at 200-horse power, the latter being capable of blowing five furnaces, and both fitted up in the most substantial manner, and at present in the best working condition.

The furnaces have been erected with the greatest care, and are fitted with air-heating apparatus of the most approved construction. The make of each furnace has generally averaged upwards of 150 tons of iron per week, and some of them have produced 180.

There are, besides the manager's house and store buildings, 187 workmen's houses, in a habitable state, attached to the furnaces and pits, and there are 20 partly built, which could be finished at a small additional outlay. There are also a new foundry, wright shop, fire-brick work, smithy, &c.

The MINERAL FIELDS, consist of COAL, IRONSTONE, LIMESTONE, and FIRE-CLAY, held in lease, by the company, at moderate fixed rents and Royalties, all situated within easy distances of the furnaces, and for the most part have the advantage of railway communication.

The COAL-FIELDS consist of several hundred acres, of which only a small portion has been wrought. Several pits, fitted with good engines and machinery, are sunk to the coal, and partly in operation.

The IRONSTONE consists of the well-known black-band, yielding about 3000 tons of calcined stone per acre; and it has been estimated that there are 300 acres or thereby still to work—besides which, there is a large extent of clay-band ironstone, hitherto little wrought, but capable of yielding a large output. There are 15 pits, with excellent steam-engines—some of them in present operation, and others ready to resume working.

The LIMESTONE QUARRY is worked by open cast, and is connected with the works by railway.

The FIRECLAY is abundant, of excellent quality, and cheaply produced, 45

The Glasgow, Paisley, Kilmarnock, and Ayr Railway (extending to Carlisle), passes close to, and has connection with, the furnaces—by means of which, and others in connection with it, the produce can be conveyed to the city and port of Glasgow (22 miles off), and to the seaports on the Ayrshire coast, each within a few miles of the works.

There is a large stock of calcined ironstone, coal, and limestone on the ground, so that the works may be put into immediate operation, and, under judicious management, the manufacture of pig-iron may be carried on to the greatest advantage. The concern will be found to be well worth the attention of persons having the requisite capital, and affords an opportunity of entering into the business seldom to be met with.

MALLEABLE IRON-WORKS.—Considerable progress has been made in the erection of extensive malleable works, which, when completed, will be capable of turning out 300 tons of bar-iron weekly. The most of the necessary machinery has been prepared by the contractors; and a portion of the work could be brought into operation in a few months to produce the half of the above estimate. This work is nearly adjoining the Pig Iron-Works, and connected by railway, and will be sold either together therewith or separately.

Plans of the property and mineral workings lie for inspection at the Ayrshire Iron Co.'s office, 113, St. Vincent-street, Glasgow, where, on application to Mr. Brown, every necessary information will be afforded, and orders given for inspection of the works.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	*Traffic Returns.* 1848	1847
Arbroath and Forfar	16	£179,939	25½	4 p.c.	£ —	262
Birkenhead, Lancashire, & Chesh.	15	706,793	38½	—	715	433
Dublin and Drogheda	35	733,655	52	3½	658	654
Dublin and Kingstown	7¾	473,282	—	7	746	677
Dundee, Perth, & Aberdeen Junc.	47½	285,745	30	6	738	289
East Anglian (Lynn to Ely)	26½	908,892	8	—	642	—
East Lancashire	24	1,207,490	20	—	956	9693
Eastern Counties	202½	7,698,370	13¾	5	10760	8010
Eastern Union	50	979,926	80	—	1000	783
Edinburgh and Glasgow	53	2,375,745	42	6	2637	3113
Edinburgh and Northern	29	953,207	18	—	661	—
Glasgow, Paisley, and Ayr	64¼	1,890,547	85¾	7	1920	1933
Glasgow, Paisley, & Greenock	23	838,964	16	3	906	876
Gt. Southern & Western, Ireland	110½	1,876,326	22½	—	1815	1061
Great Western	269¾	10,630,763	93	8	15977	14146
Kendal and Windermere	10½	147,001	23	—	99	—
Lancaster and Carlisle	70	1,291,913	48	—	1322	—
Lancashire and Yorkshire	92½	6,807,314	88½	7	5522	7530
London and North Western	428	20,010,467	136	9	33598	34802
London and Blackwall	4	1,146,289	5½	¾	636	688
London, Brighton, & South Coast	152½	5,659,189	31½	4	5600	4510
London and South-Western	186	5,836,132	49	9	6351	4955
Londonderry and Enniskillen	14¼	160,013	16	—	119	—
Manchester, Sheffield, & Lincolnsh.	46	2,078,135	80	5	2034	1687
Maryport and Carlisle	28	424,417	39	3	539	528
Midland Company	402½	8,658,604	115	7	18139	15477
Midland Great Western (Irish)	36½	583,776	—	—	928	—
Newcastle and Carlisle	65	1,184,080	101½	6	1751	1883
Norfolk	81½	1,375,633	67	6	1596	1356
North British	78	2,514,150	23½	5	1731	1149
Shrewsbury and Chester	17	591,158	17	—	521	310
South Devon	29	1,339,860	21	—	644	360
South-Eastern	165½	6,398,218	27½	6	5820	5299
Taff Vale	38	795,607	—	5½	1838	1438
Ulster	25	646,911	52	6	586	674
Whitehaven Junction	12	139,000	—	4½	167	—
York, Newcastle, & Berwick	236½	3,688,102	32½	9	9689	7129
York and North Midland	230¼	3,196869	66	10	5600	4999
FOREIGN RAILWAYS.						
Amiens and Boulogne	68¼	573,338	13¾	4	799	—
Antwerp to Ghent (monthly)	31	——	—	—	1100	—
Belgian ditto	—	——	—	—	46247	43741
Dutch Rhenish	57¼	——	1¼	—	886	871
Northern of France	211	2,000,000	4¼	4	—	8670
Orleans to Bourges (Central)	107¼	——	—	—	—	—
Orleans to Tours	72	600,000	32½	5	—	2409
Paris and Orleans	82	2,011,720	47½	12½	—	6607
Paris and Rouen	85	2,082,916	22	9½	7208	5806
Rouen and Havre	59½	——	10¾	4	2789	—
Strasburgh and Basle (monthly)	88	——	6	1½	5237	6169
West Flanders (ditto)	—	——	1	—	964	—

Total earnings for last week, £148,323, being an increase of £23,911 over last year.

RAILWAY CALLS.—The list of railway calls for March shows a considerable diminution from that of the corresponding month last year, when the total was 3,508,065*l*.; while that for the present amounts but to 2,203,659*l*., including 1,262,000*l*. upon foreign lines, a portion of which only is held in this country.

GREAT WESTERN RAILWAY.—The promoters and managers of this once promising concern have got themselves and shareholders into a mess; to escape which, from their isolated position from 10-11ths of the railway mileage of England, every step they take plunges them still deeper. With a share capital of 6,724,000*l*., they are under guarantee to other companies on a capital of 2,008,660*l*., making a total liability of 15,732,660*l*., on which they must pay, before their shareholders touch one farthing, 790,039*l*. per annum; and this from the absurdity evinced in the adoption of a different guage to the principal national lines, without being able to participate in the general traffic of the manufacturing districts.

ALARMING RAILWAY ACCIDENT.—Yesterday afternoon, about four o'clock an engine, with a luggage train, approached the swing-bridge over the canal at Weedon. The usual signal for closing the bridge was made, but, from the negligence of the guard on duty, it was not attended to, and the ponderous locomotive fell into the Government boat, used for conveying stores to the barracks, and instantly sunk it—the whole train following, causing a complete stoppage. Passengers are obliged to cross the chasm, and get into other trains. Fortunately, no lives were lost; had it been the express train, which was nearly due, the consequences must have been dreadful.

THE COPPER TRADE.—A rumour has for some time past been pretty current throughout the mining districts of the county, that Sir John Guest was about to enter the copper trade. We are enabled, upon the most undoubted authority to contradict this report.—*West Briton.*

CHEMICAL MATCHES.—The wood for the best of these matches is cut by a machine patented by Mr. A. Meyer, December 4, 1839. At the City Saw-mills of Messrs. Esdailes and Margrave there are two of these machines in constant work, which produce no less than 3,296,000 splints per day. So vast, however, is the demand for these articles, that by far the greater portion are said to be made from hand-cut splints, and from splints imported from abroad.

PERKINS' SHIP-PUMP.—A description of this pump will be found in the 38th vol. of the *Trans. of the Society of Arts*, who awarded Mr. Perkins their gold medal for the invention.—*Mechanics' Magazine.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 9 per Cent., 194½
3 per Cent. Reduced Ann., 82⅝ 2
3 per Cent. Consols Ann., 82½ 1⅝ 2½
3 per Cent. Annuities, —
3½ per Cent. Ann., 83½ 2½
Long Annuities, 8⅝ ⅞
India Stock, 10½ per Cent., 233
3 per Cent. Consols for Acc., 82⅝ ½
Exchequer Bills, 1000*l.* 3d., 17 18 pm.

Belgian Bonds, 4½ per Cent.,—
Dutch, 2½ per Cent., 43 ½
Brazilian, 5 per Cents., 77 8
Chilian, 6 per Cents.,—
Mexican, 5 per Cents., 15⅞ ¾
Spanish, 5 per Cents., 13⅝ 12⅝
Ditto 3 per Cents., 24⅛ ½
Portuguese, 4 per Cents., 17
Russian, 5 per Cents., 97

MINES.—The business transacted in the mining share market this week has not been extensive, although several shares in different mines have changed hands; still the fluctuations which have taken place in the Stock Exchange, consequent on the political movements in France, have produced a check to share transactions generally, and we, therefore, feel its effects in common.

Highly important improvements have been made in Devon Great Consols; and, but for the circumstance above referred to, we think that much business would have been done in them.

Treleigh, Tamar, West Basset, Levant, and Trehane have been in request during the week. South Wh. Francis have also been sought for, and, although at an advance, no shares have been on the market at buyers' prices.

The improvement in Wheal Franco has caused some business being done, but not to any extent worthy of notice.

Tavy Consols is represented to have improved, but we do not find that many shares have changed hands.

Bedford United, Great Wheal Michell, and Anderton, are also among the mines reported to have improved during the week.

Shares in the following mines have been sold during the week—viz.: Treleigh, Treviskey and Barrier, Wheal Williams, Wheal Franco, Devon and Courtenay, South Wheal Trelawney, Stray Park, South Tolgus, Tavy, Trehane, Mendip Hills, Mary Ann, Trelawney, Anderton, &c.

The following arrivals of specie have taken place since our last:—On the 26th February, at Liverpool, by Royal Mail steam-ship, *Acadia*, with about 9000*l.* On the 27th, arrived at Southampton, the Peninsular and Oriental Steam Navigation Company's steamer, *Hindostan*, with 153 packages of specie, value 220,000*l.* sterling, for the Court of Directors of the Hon. East India Company, being a portion of 500,000*l.*, ordered home in bullion from Calcutta; likewise three packages of gold coin, value 7000*l.*, with general cargo of merchandise.

In foreign shares the transactions have been very limited—indeed, we know of no other than a few lots of Altens.

RAILWAYS.—On Monday, a considerable fall occurred in the value of railway shares, and the market had a heavy appearance. Large sales of all the high-priced lines were pressed upon the jobbers, and the margin between buying and selling was very wide. On Tuesday, there was a little more confidence; but transactions were not important. French lines were better looked upon. On Wednesday, there was some improvement in the quotatons; but the market remained in an unsettled state. Since Thursday, prices have been a little better supported; and the fifth call of the London and York Railway has been better responded to than any previous call.

HULL, THURSDAY.—During the past week the decline observed in our last has continued with unabated violence. This morning, however, owing to the improved accounts from Paris, and the statement made by Lord John Russell, in the House, to the effect, that the Ministry did not contemplate any interference with the French Government, a decided improvement was observable. For North British, North Staffords, Newcastle and Berwicks (new), and East Anglian (preference), there was a general disposition to buy.

LATEST CURRENT PRICES OF METALS.

LONDON, MARCH 3, 1848.

	£	s.	£	s.	d.
IRON—Bar *a*..Wales..*ton*	0	0	— 7	5	0
,, ..London ..	0	0	— 8	10	0
Nail rods ,, ...	0	0	— 9	5	0
Hoop(Staf.),, ...	0	0	—10	0	0
Sheet ,, ,, ...	0	0	—11	0	0
Bars ,, ,, ...	0	0	— 9	10	0
Welsh cold-blast foundry pig ..	4	0	— 4	10	0
Scotch pig *b*, Clyde	2	8	— 2	10	0
Rails, average	0	0	— 7	5	0
Chairs	0	0	- 5	5	0
Russian, CCND *c*..	0	0	—17	10	0
,, PSI	0	0	—	—	
,, Gourieff	0	0	—	—	
,, Archangel	0	0	—13	10	0
Swedish *d*,on the spot	0	0	—11	10	0
,, Steel, fagt.	0	0	—16	0	0
,, ,, *kegs e*	0	0	—14	0	0
COPPER—Tile *f*	0	0	—87	10	0
Tough cake	0	0	—88	10	0
Best selected	0	0	..91	10	0
Ordin. sheets, *lb*...	0	0	— 0	0	10

	£	s.	£	s.	d.
COPPER—Ord. bottoms ..	0	0	— 0	0	11
YELLOW METAL SHEATHING	0	0	— 0	0	8½
TIN—Com. blocks *g*...*cwt.*	0	0	— 3	19	0
,, bars	0	0	— 4	0	0
Refined	0	0	— 4	3	0
Straits *h*	3	16	— 3	18	0
Banca	0	0	— 4	4	0
TIN-PLATES—Ch., IC *i*, *box*	1	7	— 1	9	0
,, IX ...	1	13	— 1	15	0
Coke, IC	1	4	6 1	5	0
,, IX	1	10	6 1	11	0
LEAD—Sheet *k* .....*ton*	0	0	—19	0	0
Pig, refined	18	15	—19	0	0
,, common	17	10	—17	15	0
,, Spanish, in bd.	0	0	—17	0	0
Red.....	0	0	—19	0	0
Dry White.....	0	0	—23	0	0
Shot (Patent).....	0	0	—20	0	0
SPELTER—(Cake) *l* on spot	18	10	—19	0	0
,, for arrival	0	0	—18	15	0
ZINC —(Sheet) *m* export.*	26	0	— 27	0	0
QUICKSILVER *n* .....*lb.*	0	0	— 0	4	6

Spelter is lower to-day (3d inst.), and can now be purchased at 18*l.* per ton; in other articles no change,

MONTHLY REPORT.

Business in metals, which had been very dull for a long time previously, gave signs of improvement towards the middle of last month, when many foreign orders which had been on hand, and also several recent ones, were given out for execution; but the revolution in France, and the uncertainty of continental affairs generally in connection with this event, have completely checked the healthy tone which was beginning to exhibit itself, and at the present, so far as practicable, all foreign orders are suspended.

IRON.—Welsh and Staffordshire are nominally 5s. per ton higher than 1st. ult.—the men connected with the latter have partially resumed work, but their late strike has caused stocks to be low. Scotch pig reached 52s. 6d. for No. 1, and 51s. 6d. for mixed Nos. last month; but the last quotations, with more sellers than buyers, were 50s. and 48s. Several parcels of Swedish have been sold at 11*l.* 10s., and there is now scarcely any left. In steel no sales, except a lot of faggot at 15*l.* 15s.

COPPER was yesterday reduced—viz.: manufactured ½d. per lb., and unmanufactured 4*l.* 10s. per ton. YELLOW METAL SHEATHING was reduced at same time ¼d. per lb.

TIN.—For English the demand has been dull lately, and yesterday it was reduced 3s. per cwt. Banca and Straits remain at last month's quotations. The stock on hand of both sorts on 1st February was 498 tons; less cleared for home use in February, 25 tons; exported ditto, 35 tons=60 tons—leaving the stock on hand, 438 tons. It is reported that the Dutch East India Company have succeeded in placing in firm hands the 60,000 slabs of Banca, upon which the purchaser of the whole lot of 120,000 slabs in July last was unable to meet his prompt; the price is not publicly known, but it is thought to be about 47 fl. per 50 lb. Neth.

TIN-PLATES.—Coke quality were much in request until the last 10 days, and price advanced full 1s. 6d. per box. The advance is maintained, but the demand has fallen off. Charcoal, on the contrary, is a shade lower.

LEAD remains precisely as last month, with but little doing.

SPELTER, owing to the almost total absence of demand for the last four or five weeks, has yielded in price; the last sale was at 19*l.*, but we believe 10s. less would be accepted, both for what is on the spot as well as for arrival. We had no importations last month, but, the ice having broken up at Hambro', arrivals may be soon expected. The stock on hand 1st February was 1840 tons: it was now 1700, showing the unusually small quantity of only 140 tons having been taken out of stock in a whole month.

THE IRON TRADE.—At a meeting of the creditors of Messrs. Jevons, Sons, and Co., held in Liverpool, it was determined that the estate should be wound up, under inspection; the inspectors to consist of Dr. Bowring, M.P., of the Llynvi Iron-Works; Mr. W. Brown, of the firm of Brown and Freer, Stourbridge; Mr. J. Williams and Mr. J. Finch, jun., both of Liverpool; and Mr. G. Davey, of the Bilston Ferry Iron Company; with the co-operation of Messrs. Jevons, Sons, and Co. The inspectors to be instructed to expedite the settlement of accounts at the earliest convenient period, and to apportion the first dividend whenever the assets shall amount to 2s. 6d. in 1*l.*, and to make additional dividends whenever the assets amount to 1s. in 1*l.* The meeting, which was numerous and highly respectable, concluded with a request to Dr. Bowring, as chairman, to convey to the Messrs. Jevons an expression of deep sympathy at the misfortunes which have befallen their house, after an honourable existence of more that half a century.—*Wolverhampton Chronicle.*

DOWLAIS IRON-WORKS.—The most gloomy anticipations prevail with reference to these gigantic works; it is believed their days are numbered, and that another week or two will witness the removal of every portion of the immense plant and machinery of these, the finest coal-works in the world. Several miles of tram-plates have already been taken up, and the plates melted; six pits, with their engines, have been taken up; three blast-furnaces have been blown out; and, in a few more days, 11 more furnaces, it is said, will share the same fate. The colliers are about to be discharged; most of the medical gentlemen have received notice that they must depart, and so have the schoolmasters and schoolmistresses. The distress, poverty, and misery, which the stoppage of the Dowlais Works must create, and spread far and wide, are fearful and overwhelming to contemplate.—*Swansea Herald.*

THE MINING DISTRICTS.—There is now every prospect of the recent strike amongst the miners being brought to a most satisfactory termination, in the general return of the workmen to their employment, upon the reduced terms of remuneration originally proposed by the masters, who have remained firm to the last. At the latter end of the past week, the works of Messrs. Cresswell and Sons, Messrs. Millington, and Mr. John Barker, at Tipton, and Messrs. Bills and Mills, at Darlaston-green, were once more in operation; and, on Monday last, the men employed by Messrs. Sparrow and Sons, and Mr. George Jones, of Bilston, and Mr. Hills, of Tipton-green, returned to business. On the same day there were signs of renewed activity at the Messrs. Bagnall's establishment, at Toll End Forge. These appearances are gratifying in the extreme, as indicative of a good understanding between masters and men, so essential to the interests of both. We have learnt that there is still one exception to this revival of trade; and that on Friday and Saturday last, the puddlers belonging to the Patent Shaft Works, Wednesbury, had an interview with the managers, on behalf of the proprietors, which resulted in the official announcement, that the men might play for twelve months, unless they consented to the proposed reduction of 20 per cent. The puddlers still hold out, notwithstanding that they offered their services at the reduced scale to the British Iron Company, where they are reported to have been told that, if they were wanted at all, nine or ten weeks would necessarily elapse. Taking the district generally, mining affairs have assumed the most promising aspects.—*Birmingham Advertiser.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	—
512	Albert Consols.....	1 ..	2½
1024	Alfred Consols	4½..	14
235	Andrew and Nangiles	25½..	11½
1000	Antimony and Silver-Lead Mining &Smelting	5 ..	5
1624	Balleswidden	9 ..	18
128	Balnoon Consols.....	25 ..	35
10000	Banwen Iron Co.....	2 ..	—
1000	Barristown	4½..	7
4000	Bedford	2½..	3
128	Besore Lead Mine.....	14 ..	10
315	Birch Tor Tin Mine....	24½..	—
8000	Blaenavon	50 ..	23
100	Botallack	175 ..	80
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10 ..	13
—	Ditto ditto, scrip.....	10 ..	12
128	Budnick Consols	52½..	30
128	Burthy	20 ..	21
100	Bwich Cwmerfin	20 ..	—
128	Callestock	17 ..	30
1000	Callington	19 ..	32
20000	Cameron's Steam Coal	4 ..	5½-⅝
256	Caradon Copper Mine	9½..	2
256	Caradon Mines	22½..	17
256	Caradon United	24 ..	5
256	Caradon Wh. Hooper..	21 ..	15
1000	Carn Brea	15 ..	105
3000	Carthew Consols.....	1½..	6
2048	Cascado.....	1 ..	2
112	Charlestown	220 ..	30
166	Cleveland.....	9 ..	5
512	Coatlithe Hill	½..	2
1900	Combmartin	7½..	3
500	Comblawn	5½..	6
128	Comfort	45 ..	90
256	Condurrow	20 ..	31-2
2560	Cook's Kitchen	14 ..	2
2048	Coombe Tin Mine	4½..	2
1000	Coombe Valley Quarry	2½..	3½
1000	Copper Bottom	1 ..	1
1024	Cosheen	4½..	20
240	Craddock Moor	16½..	15
128	Creeg Braws	120 ..	100
500	Culvert Mine	12½..	15
1000	Cwm Erfin	1½..	2½-3
2048	Dartmoor Consols....	3 ..	2
300	D.Prior&Buckfastleigh	14 ..	26
7500	Demelza Mines	2 ..	2
7100	Derwent	8½..	5
1024	Devon&CourtenayCon.	7½..	2-3
1024	Devon Great Consols..	1 ..	210-15
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	50
2560	Drake Walls	4 ..	4
10000	Durham County Coal..	45 ..	5
3000	Dyfngwm	10 ..	12½
256	East Alvenney	10 ..	25
112	East Caradon	42 ..	42
2048	East Crowndale	5½..	4½
512	East Combe Silver-Lead	6½..	6½
128	East Pool	5 ..	20
100	East Relistian	22 ..	40
—	East Wheal Albert....	1 ..	3
94	East Wheal Crofty	125 ..	280
1024	East Wheal Fortune ..	2 ..	3
1024	East Wheal Friendship	3 ..	3
128	East Wheal Rose	50 ..	1150
2048	East Wh. Rough Tor ..	¼ ..	2
—	East of Scotland Iron Co.	2½..	1½
123	East Wheal Seton	14 ..	15
256	Elborough.....	1½..	2
256	Exmoor Wh. Eliza....	3½..	6
512	Fowey Consols	40 ..	45
6400	Gadair	2 ..	2
20000	Galvanised Iron Co. ..	10 ..	9½
4000	Gen.Mining Co.for Irel.	1½..	2½
2048	Georgia Tin Mines	1½..	1½
256	Gonamena	32½..	30
128	Goonvrea	4 ..	1½
244¼	Grambler & St. Aubyn	— .	10
100	Great Consols	1000..	400
256	Great Callestick Moors	22..	25
2560	Great Michell Consols	1½..	3½
256	Great Resugga Moor ..	11 ..	12
512	Gt.Wh.Rough Tor Con.	15½..	18
100	Grogwinion	5 ..	—
256	Gwineaor Consols.....	7 ..	10
6000	Heigneton Down Con..	½..	2½
256	Herodscombe	5½..	4½
256	Herodsfoot	18 ..	18
10000	Hibernian	12½..	1½
239	Hobb's Hill	6 ..	3
1000	Holmbush	19 ..	11
827	Kirkcudbrightshire....	5½..	3
500	Lady Elizabeth	5 ..	5
2048	Lamherooe Wh. Maria	11 ..	4
128	Lelant Consols	90 ..	60
160	Levant	— ..	90
1000	Lewis	15 ..	6½
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	50
256	Lostwithiel Consols ...	15 ..	15
6000	Marke Valley	10 ..	4
5000	Mendip Hills	2½..	1½
5000	Merionethshire Slate & Slate Slab Co..	1½..	2
20000	Mining Co. of Ireland	7 ..	7
256	New East Crowndale..	3½..	3½
128	North Fowey Consols..	37 ..	34
100	North Pool	45 ..	475
70	North Roskear	10½..	310
256	North Wh. Abraham ..	1 ..	1
252	North Wh. Leisure ..	1½..	2
128	North Wh. Providence	2½..	3
15000	Northern Coal Co.	23 ..	2
128	Par Consols.....	— ..	1000
4000	Pennant	1½..	2½
100	Pesrhiw	30 ..	65
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin....	9½..	15
512	Plymouth Wh. Yeoland	6½..	21
256	Polsaith Consols	4½..	7
112	Providence Mines	35 ..	45
10000	Rhymney Iron.....	50 ..	20
10000	Ditto New	7 ..	6½
2500	Rhoswhiddol Mine	— ..	10
256	Rose Consols	10 ..	2
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
—	Shotts Iron Company..	50 ..	55

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
2500	Silver Valley	5½..	2
1100	South Dolcoath	3 ..	2½
128	South Caradon	10 ..	450
256	Sth. Friendsh. Wh.Ann	16 ..	25
200	South Harvannah	10 ..	25
256	South Tolgus	7½ ..	50
256	South Trelawney	20 ..	7½
128	South Yeoland	16½..	20
128	South Wheal Basset ..	110 ..	95
256	South Wh. Betsey....	2½..	5
124	South Wh. Francis....	160 ..	210
256	South Wh. Hope	— ..	5
1000	South Wh. Maria.....	2½..	2
256	South Wheal Rose....	11½..	1
256	South Wh. Sophia	4 ..	4½
10000	Southern&Western,Irish	2 ..	4
280	Spearne Moor	30 ..	40
256	St. Austell Consols....	9 ..	6
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel ..	5 ..	10½
999	St. Minver Consols	1 ..	6
1000	Stray Park	43 ..	18
9600	Tamar Consols	3 ..	4½
1024	Tavy Consols	4	8-10-12
6000	Tincroft	7 ..	6
1000	Tin Vale.....	2 ..	1½
128	Tokenbury	147½..	10
256	Trehane	2 ..	24
5000	Treleigh Consols.....	6 ..	3
2000	Tremance	2 ..	50
96	Tresavean	10 ..	210
120	Trethellan	5 .	16
120	Treviskey and Barrier	130 ..	130
288	Trevean	1½..	25
128	Trewellard	12 ..	26½
100	United Mines .....300 ..		350
256	Wellington Mines	15 ..	30
128	West Basset.....	45 ..	30
256	West Caradon.....	20 ..	120
128	West Cargoll	2 .	12
512	West Fowey Consols ..	40 ..	15
256	West Providence.....	9 ..	25
200	West Seton	40 .	150
—	West of Scotland Iron Co.	210..	210
120	West Trethellan	5 ..	30
256	West United Hills	— ..	5-8
256	West Wh. Friendship..	9 ..	12
3845	West Wheal Jewel....	11 ..	1½
2560	West Wh. Maria.....	3 ..	⅛
256	West Wheal Shepherd.	5 ..	2½
256	West Wheal Tolgus ..	21½..	5
256	West Wheal Treasury	19 ..	10
5200	Wicklow Copper.....	5 ..	12
184	Wheal Adams	51 ..	10
1000	Wheal Agar.....	— ..	10
256	Wheal Albert	10 ..	8
128	Wheal Acland.....	13 .	2
256	Wheal Allen	2 ..	5
240	Wheal Anderton.....	21 ..	25
128	Wheal Ann	— ..	50½
512	Wheal Ann, Bridford..	1 ..	2
512	Wheal Anna Maria....	3½ .	5
1024	Wheal Ash	4½..	8
120	Wheal Bal	5½..	20
2560	Wheal Barbara	1½..	4-5
256	Wheal Benny	10½..	6
256	Wheal Blencowe	21 ..	5
256	Wheal Bucketts	20 ..	5
256	Wheal Calstock	3 ..	8½
136	Wheal Clifford ... ..190 ..		190
1024	Wheal Coad	½..	5
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	2½..	2½
256	Wheal Dyke.....	12 ..	13
256	Wheal Fortescue	6½..	5
512	Wheal Fortune Consols	3½..	6½
2048	Wheal Frederick.....	2 ..	2
388	Wheal Franco	27 ..	35
128	Wheal Harriet.....	45..	50
256	Wheal Jane.....	21 ..	15
256	Wheal Louisa.....	8½ .	8
112	Wheal Margaret	79 ..	250
512	Wheal Mary Ann	5 ..	20
256	Wheal Mary Consols..	40 ..	26
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	41 ..	150
128	Wheal Rose.....	60 ..	15
2048	Wheal Samson.....	½ ..	20
99	Wheal Seton .....214 ..		1000
256	Wheal Sisters	30½..	17
256	Wheal Sophia	5½..	10
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½..	95
256	Wh.Tremaine(St.Ervan)	4½..	20
256	Wheal Tremayne	35 ..	25
128	Wheal Trew.....	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena.....	140 ..	265
121	Wheal Venland	29½..	30
256	Wheal Vlow (Perranz.)	⅜..	⅜
184	Wheal Vyvyan.....	— ..	60
256	Wheal Williams.....	6 ..	14

FOREIGN MINES.

5000	Alten Mining Company	14½..	3
15000	Asturian Mining Co. ..	12 ..	4
20000	Australian	2½..	4½
10000	Anglo-Mexican Co....100 ..		2
12374	Ditto Subscription	25 ..	2½
6000	Barossa Range	½ ..	2
3000	Bolanos ....150 ..		3½
2000	Ditto Scrip	15 ..	3½
12000	Brazilian Imperial	23 ..	5½
10000	Cobre Copper Co.	40 ..	18
8500	Colombian Co. regis...	55	1
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co....	14 ..	2½
10000	General Mining Ass'n.	20 ..	13½
5000	Kinzigthal Mining Ass.	2 ..	3½
20051	Mexican Company....	59 ..	—
2000	Mexican & SouthAmer.	7 ..	1½
5000	Mocaubas & Cocaes ..	30 ..	4-5
29320	Rl.del Monte, regis. / Ditto unregistered	28½..	1½-2
	Ditto Red Debentures	— ..	10
	Ditto Black ditto	— ..	6
	Ditto Loan Notes ....150 ..		60
7000	Royal Santiago	10 ..	6
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	6½-⅞
43174	United Mexican ...Av.	28½..	1½-2½

SOUTH AUSTRALIAN SHARE MARKET—OCT. 8.

Company.	*No. of Shares.*	*Capital.*	*Paid-up.*	*Present Price.*
Burra Burra.....	2464	£12,320	£12,320	£103 0
Princess Royal	400	20,000	16,000	67 0
Adelaide.....	2000	10,000	10,000	4 0
North Kapunda	436	21,800	21,800	20 0
Royal Mining Company 10000		100,000	10s. p. sh.....	0 15
Wakefield	500	1,000	£1,000	1 5
Greenock Creek	300	1,000	1,000	6 0
Montacute	100	5,500	5,500	55 0

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 14—Chester Main 13 9—Dipton Tanfield 12 6—Hasting's Hartley 14 9—Nelson's West Hartley 14 9—North Percy Hartley 14—North Pontop 12 6—New Tanfield 14—South Peareth 14—South Pontop 12 6—Tanfield Moor Butes 14 Townley 14 9—West Wylam 14 9—Wall's End Bewicke and Co. 14 9—Brown's Gas 12 6—Eden Main 16—Braddyll's Hetton 17—East Hetton 13 9—Haswell 17 9—Hetton 17 6 to 17 9—Lambton 17 3—Russell's Hetton 17 3—Stewart's 17 6—Kelloe 16 6—Thornley 15 9—Adelaide Tees 16 9—Tees 17—West Cornforth Coke 12.—Ships at market, 303; sold, 59; unsold, 244.

WEDNESDAY.—Dean's Primrose 13 9—Dipton Tanfield 12 6—Hasting's Hartley 14 9—Nelson's West Hartley 14 6—North Percy Hartley 14—North Pontop 12 6—New Tanfield 14—New Pelton 13 3—Original Tanfield 12 9—South Peareth 14—South Pontop 12 6—Tanfield Moor 15—Tanfield Moor Butes 13 6—Walker Primrose 12 6—West Wylam 14 6—West Hartley 14 9—Wall's End Bell and Brown 14 3—Brown's Gas 12 6—Gosforth 14 3—Heaton 14—Riddell's 14 3—Wharncliffe 14 3—Eden Main 15 9—Haswell 17 9—Hetton 17 9—Lambton 17 3—Russell's Hetton 17 3—Shotton 16—Hudson's Hartlepool 16—Thornley 15 9—Adelaide Tees 16—Anthracite 25—Abercrave Stone Coal 27.—Ships at market, 272; sold, 59; unsold, 213.

FRIDAY.—Buddle's West Hartley 15—Carr's Hartley 15—Chester Main 13 9—Davison's West Hartley 15—Dean's Primrose 13 6—Dipton Tanfield 12—Holywell Main 15—Nelson's West Hartley 15—North Pontop 12—New Tanfield 14—Ord's Redheugh 13 6—Original Tanfield 12—Pontop Windsor 13 6—South Peareth 14—South Pontop 12—Tanfield Moor 15—Wall's End Bewicke and Co. 14 3—Gosforth 14 3—Heaton 14 3—Riddell's 14—Wharncliffe 14 3—Eden Main 16—Braddyll's Hetton 17—East Hetton 13 9—Haswell 17 9—Hetton 17 6—Keepier 17—Lambton 17—Lyons 15 3—Russell's Hetton 17—Stewart's 17 6—Hudson's Hartlepool 16—Hough Hall 14 6—Kelloe 16 3—Trimdon 15—Thornley 15 9—Adelaide Tees 16—Denison 18—Seymour Tees 15—Tees 17—Abercrave Stone Coal 25 6—Cowpen Hartley 15—Ships at market, 323; sold, 153.

LEAD ORES

Sold at Holywell.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Pantymwgn	20	£9 5 0	Mather & Co.
Penryhymbias.....	50	10 2 6	ditto
ditto	46	10 2 6	Walker, Parker, & Co.
Westminster	65	9 5 0	ditto
ditto	7½	9 12 6	Newton, Keates, & Co.
ditto	7½	9 12 6	Mather & Co.
Jamaica	110	10 0 6 ..	Newton, Keates, & Co.
ditto	40	10 10 6	ditto
Belgrave	25	9 15 0	Walker, Parker, & Co.
Fronfowngg	130	10 5 0	Mather & Co.
ditto	10	10 16 6	J. P. Eyton.
Pant Du	3	9 8 6	Newton, Keates, & Co.
Cae-tan-y-graig	4½	9 8 0	ditto
ditto	4½	9 8 0	Mather and Co.
Halkin Hall.....	7½	9 7 0	Newton, Keates, & Co.
Pwllclair	9	9 8 6	J. P. Eyton.
Pwllcryduffryn.....	3½	9 10 0	Newton, Keates, & Co.
ditto	3½	9 10 0	Walker, Parker, & Co.
Cae-conroy	32	11 0 0	ditto
ditto	1	9 0 0	Newton, Keates, & Co.
Foxdale.....	32	17 5 0	Walker, Parker, & Co.
Cwmesbon	17	14 14 0	Mather & Co.
Total tons	....	628.	

Sold at Aberystwith.

East Logylas	72	£10 0 0	Newton, Keates, & Co

Sold at the Mine.

East Wheal Rose.....	85	£14 0 0	Walker, Parker, & Co.
ditto	6	8 9 0	R. Michell & Son.
ditto (Oxnam's).....	46	11 18 6	Newton, Keates, & Co.

Sold in London.

Callington	100	£17 1 6	Tamar Company.

BLACK TIN.

Sold at Mellenear Smelting-House, St. Erth.

Mines.	*Tons cwts. qrs. lbs.*	*Price.*	*Amount.*
Lewis Mines	8 13 1 10	£45 15 0	£396 10 3
ditto	4 14 3 16	43 10 0	206 7 9
Coinage	.....	0 10 0	6 14 0
Total....	13 tons 8 cwts. 0 qrs. 26 lbs.—Amount....		£609 12s.

Mine.	*Tons.*	*Price per ton.*	*Purchasers.*
Great Polgooth	31	£43 12 6 ..	Calenick Co. and Williams.
ditto	1	39 2 6 ..	ditto and ditto.

COPPER ORES.

Sampled Feb. 16, and Sold at White's Hotel, Pool, March 2, 1848.

Mines.	*Tons.*	*Price.*

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed— To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

*** We should feel obliged to all pursers, captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

Glossary of Mining Terms.

We are preparing for publication, as a neat pocket volume, our Glossary of English and Foreign Mining and Smelting Terms. The new edition will comprise several corrections in the Cornish Terms; also, the additions with which we have since been favoured by correspondents—comprising those of South Staffordshire and Newcastle.

Hydraulic Telegraph.—Mr. Malcolm's letter reached us too late for publication in our present Number.

"J. P." (Walsall).—We should be glad of the particulars.

"C. D." should first fix upon a piece of waste land, suitable for the purposes he has in view, and he can then immediately ascertain with whom he must come to terms—by application to the parochial authorities, or the lord of the manor.

Hydraulic Telegraph.—"A Constant Reader" is informed, that we believe Mr. Jowett hopes to avoid the action of frost by covering his pipes with a layer of fine sand, which, being a non-conductor of heat, prevents the effects of that otherwise destructive agent.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, MARCH 4, 1848.

At a meeting of the Legislative Council of Adelaide, South Australia, in October last, Governor Robe laid before the Members a despatch from Earl Grey, in reply to a communication previously made on the subject of the sale of land in that colony. It appears, that for 12 months previously, the Governor had uncompromisingly refused to put up for sale any lands supposed to contain minerals; and in his communication to the Colonial Secretary in England, he stated, that the "prices were understood to have been kept down by a coalition of the various monied interests in the colony, under the denomination of the Land League. The objects of the League were set forth in two of the local newspapers (*Observer*, 10th Oct., and *Register*, 7th Oct., 1847) lately transmitted, as intended to keep down competition to very little beyond the upset price, and then to divide the purchases by lot afterwards." The reply is, in general, but an echo of the entire communication, and approves of a plan, suggested by the Governor himself, to check the alleged abuse—that of putting up lands, supposed to contain minerals, at a higher price than 1*l.* per acre; yet distinctly states, "that the Crown has no interest in the matter, except in its capacity of trustee for the public" The proceedings of Governor Robe in this matter have rendered him exceedingly unpopular in the colony; and in the anxiety to tell the first story, and justify his proceedings, he has adopted statements and conclusions, which he knew to be exaggerated and calumnious misrepresentations. He wrote his letter on the 26th Oct.—while on the 10th previously every explanation was given in the *South Australian Gazette*; and it was shown, that no coalition had been formed, or any such denomination as the "Land League" adopted. Where the Governor got his information of this bugbear league, no one in the colony can hazard a guess; but it is shrewdly suspected, that it was a gratuitous assumption on his own part, to form an excuse for his irregular proceedings, during the past two years, on the mineral lands question. It is needless, however, at the present, to enter further on the subject: we understand his resignation has been accepted by the Queen; and we trust the colony will obtain, as his successor, a Governor imbued with more liberal principles, and more likely to advance the interests of a young and rising community like that of South Australia.

No event, connected with the mining interests of the country, has, for a long time, given us greater gratification, than the announced resumption of business by the North and South Wales Bank. Among the crowd of firms which could not endure the pealings of the commercial storm, which, a little time since, passed over these kingdoms, there was not, perhaps, one that went down, carrying with it a fairer reputation, or inspiring a more general regret, than the house, whose restoration to place and credit we have just mentioned. The failures, which so alarmingly shook the stability of our wide-spread commerce, were, in general, free from all mixture with, or participation in, the banking business of the country. There was a soundness in the circumstances, and a prevailing ability to meet all their engagements, which was highly creditable to the bankers of the United Kingdom at large, and which saved us from a far wider circle of misfortunes than would have fallen upon us, had their stability and their resources been more inadequate to the crisis, than happily they proved to be. This bank, however, was carried away by the torrent, but not without having done all that honour and exertion could do against its overwhelming force. It is understood to be now a well re-established firm; and knowing the benefits it has conferred on the principality, and trusting it will be in its power to continue the same beneficial career, to the advantage of the mining interests of Wales, and to the perfect restoration of its own circumstances, we may safely and justly commend it to the confidence of the mining community at large.

It is impossible for us to peruse the statement contained in last week's Journal, of the peculiar circumstances of the Great Dowlais Iron-Works, in Glamorganshire, without great interest and anxiety. It appears that the works have been carried on under a somewhat favourable lease, for 99 years, granted by a former Marquis of Bute—that term is now within a few weeks of its conclusion, and the question is reopening in all its breadth, as to the conditions of a new lease. The lessees say that, for a long course of years, and at a great expenditure of labour and money, they have materially enhanced the value of the estate; that they have constructed roads, and collected a rural population, by which the estate itself, and its neighbourhood, are transformed to a busy and productive arena, instead of the unprofitable solitude in which they found it; that fuel, the great staple of their works, being used up in its accessible strata, must be procured at greater depths, and at a heavier expense; and that, altogether, the mines will lapse to the lessor, beyond all comparison, a better property than when it originally passed out of his hands. The owner, on the other side, reasons, that as the original terms of the lease were undoubtedly easy, and the company is known to have realised a very large property by the productive wealth of the mines, and the advantages secured to them by the lease, they must not expect to accomplish an equally favourable bargain, now that the resources of the mines are tested, and their difficulties, as an infant company, are long since passed away. If the first lease, with its chief provisions, ruled in favour of the company, the second should, in all justice, rule in favour of the hitherto unpaid and unprofiting proprietor. It is impossible not to feel the force of the facts thus stated on either side, and we think they furnish an equitable ground for concessions on the part of both landlord and tenant. Of course, the noble proprietor has a full right to say that, the mines having again come back to him in due course of law, he expects, on parting with them again, their just value, taking all the incidents and circumstances of the property into consideration. We hope both parties will see that their true policy will lead them to mutual concessions. If either should be inexorably stiff, all chances of an advantageous contract for either will be materially abated. In the adjustment of their differences, it is important that the magnitude of the interests involved should prompt them to an amicable arrangement. The workmen, for instance, employed on these mines amount to the serious number of 7000, representing and maintaining so great a multitude as about 30,000 souls. The stoppage of these important works would, in all human probability, result in the destitution and social misery of untold families, who have hitherto rejoiced in the comforts, however humble, of a settled and a competent home.

We briefly noticed, in our last Number, that Sir Wm. Somerville had obtained leave to bring in a bill for the removal of that absurd Act of the old Irish Parliament (10th Geo. I., c. 5), which has been allowed so long to remain a blot on the statute-book, by which the holders of ecclesiastical lands, and the guardians of minors and lunatics, were prevented granting leases of mineral lands, or letting them for mining purposes, at a less royalty than 1-10th of the produce—and that even without any security from further imposition, or being turned out of possession, should any discovery of a highly-valuable nature be made. The operation of this Act of Parliament has been a direct discouragement to enter into mining speculation on lands which come under its influence; and there is much so situated, containing some of the finest mineral deposits in the island. Sir William Somerville's bill removes the restriction, as to the payment of 1-10th of the gross produce, leaving the parties to make a fair and unrestricted bargain between themselves, as may be agreed, and gives a power of leasing to the parties in possession to an extent not exceeding 41 years. This latter clause appears to us perfectly futile, as there could be no harm in leaving time for leasing entirely open. As, however, setts are rarely taken for a longer term than 21 years in Cornwall, this restriction will not have any injurious tendency, or prevent the development of that enterprise, which a diminished royalty and leasehold security will bring into action. It is certainly not by any means creditable to those who have hitherto had the management of affairs in Ireland, that this statute should have been so long unrepealed, but "better late than never;" and we doubt not the bill will triumphantly pass the Legislature, when it is to be hoped a new era will arise in the development of Ireland's mineral wealth.

† Copper Ore.—In the House of Commons, last night, Mr. Scholefield said, he understood it was the intention of her Majesty's Government to reduce the duty on copper ore, and he should be glad to know if the reduction would be extended to foreign copper.—The Chancellor of the Exchequer replied, that her Majesty's Government proposed to reduce the duty both on copper ore and foreign copper.

† Mining Slave Labour.—A petition is in course of signature, for presentation to the Queen, praying her Majesty may issue commands requiring all British subjects to relinquish their dealings in slaves in Cuba, Brazil, and other places; and that a return may be made by all English mining companies of the number of slaves held by them; how they have been acquired, whether by purchase, or leased yearly, or for a term; the number of deaths by accident or punishment; the number of punishments and lashes inflicted, &c.—in fact, the fullest details. This is a most important step, and does infinite credit to the humanity and proper feeling of the promoters. It is monstrous to suppose the 19th century will sanction the continuance of such barbarism. It is almost inconceivable that Englishmen with large fortunes, and in the position of gentlemen, can still be found as the abettors of cruelty, and all things revolting to human nature. We have received the foregoing from a correspondent, who informs us, that a list of the companies using slaves, with the names of the directors and shareholders, and much other statistical information on the subject, is about being published.

† Coal Mining in South Staffordshire.—An important discovery of coal, ironstone, and fire-clay, has been made at Aldridge, in Staffordshire; and a meeting of the landowners interested was held at the Anchor Inn, in that place, on Thursday, to receive a report from Messrs. J. Bromley, of Wednesbury; J. Roberts, of Walsall; and B. Williams, of Wolverhampton, mining engineers; of which the following is an extract:—"After a careful examination of the coal, ironstone, and fire-clay, it is our decided opinion that the ironstone is of excellent quality, and great in quantity, particularly one measure which is more abundant than any we know of in South Staffordshire. As regards the coal, we pronounce it to be of very superior quality; and, that within 132 yards from the surface there are, at least, four workable seams, varying from 3½ to 6½ feet in thickness. Also, from the trials already made, we have reason to believe, that the fire-clay is abundant in quantity, and in quality cannot be excelled." Very considerable difficulties were encountered in the sinking, particularly from the running sand and water, and much credit is due to Mr. Roberts, the acting engineer, for the successful manner in which he overcame them, and sinking 160 yards with a gin only, without the aid of an engine. Operations are suspended for a short period, until a steam-engine can be erected, and they have good geological reasons for expecting still more valuable measures at a greater depth than those already met with.

MINING IN SOUTH AUSTRALIA.

[From the *South Australian Register*, Oct. 9.]

Burra Burra.—The quantity of ore which left the mine last week was 355 tons.

New Lode.—The new lode, 3 miles to the southward of the present workings, is 3 feet wide, producing fine stones of blue carbonate. The shaft is 10 feet deep, and the appearances are very favourable.

Smelting.—The first running took place last week; 4½ cwts. of copper was produced at one tapping; but a different blowing apparatus will be required before the smelting process can be carried on to the extent proposed.

Sales of Copper Ore at Port Adelaide.—Tenders for the sale of 500 tons of Burra Burra ore, lying at Port Adelaide, were opened on Friday. The tender of the Australian Mining Company, at 17*l.* 17*s.* per ton, was accepted. It is stated by two of our contemporaries, that a director of the Burra Burra had tendered 17*l.* 10*s.* for the same ore. We are authorised to say that that statement is wholly incorrect.

York Peninsula Mine.—F. H. Dutton, Esq., and Capt. Rodda, returned on Wednesday, from an inspection of this mine. The Government land, which lies between the sea boundary and high-water mark, intersects the great lode; and, unless the Government either permit access to the ore through that land, or let it to the owners of the mine, extensive shafts will be required to get at the lodes. Capt. Rodda brought with him various samples of the ores, assays of which we shall have pleasure in publishing in due time.

Mount Remarkable.—We have been favoured with a copy of the following letter, dated 12th ult., from Mr. Finke, who is at present engaged in the mineral exploration of this survey:—"I have been continuing my researches at Stoney Creek; and, although the result has not been so favourable as we anticipated, it has convinced us more and more that we are in the vicinity of some great deposit of copper ore. The lode we have opened continues to produce most superior grey ore and green carbonate, although not in quantity; it is about 2 ft. in width, carrying two most regular walls filled up with rich gossan, spar, &c. Its inclination is at present rather flat, about 4 ft. in the fathom; but at greater depth it will, no doubt, take a more upright course—altogether, it is a place of the most favourable and promising kind. The ground is of a very soft, soapy, killas kind, intermixed with lime, strong clay, &c. We have found three other places where there are indications of copper, but we have not yet opened upon them. We have also information of the existence of ore at a place two miles distant from the present working, at Stoney Creek, which I make no doubt we shall succeed in finding. After a month's hard work at the Mount to cut the lode, we were obliged to relinquish it without obtaining our object, chiefly owing to the softness of the ground through which the ore had forced itself up, probably from some depth; but a small shaft would soon bring it to light—and, from the quantity as well as quality of what was strewed on the surface, I feel myself warranted in predicting the existence of a first-rate lode of ore in that locality. You have, no doubt, been apprised of the discovery of a very good slate quarry on the survey, of which I shall bring in specimens, as well as of all the different descriptions of ore we have discovered.

Reedy Creek Mines (Australian Mining Company).—It was reported yesterday that two miners, who had been set upon a promising piece of ground on the forenoon of Saturday last, cut, during the afternoon, at the depth of a few feet, a very rich lode of copper ore.

New Mine at Kapunda.—A splendid lode of copper ore has just been discovered on the section near the Kapunda, belonging to E. Stephens, Esq., and G. F. Aston, Esq. A specimen of the ore was sent to the Exchange the other day, where it may be seen.

Wheal Gawler Silver-Lead Mine.—The operations at this mine are, and have been for the last six or seven months, confined to intersecting, by cross-cuts, at a proper depth, the various lodes traced by former working, and ascertained to carry metal. From the 12 fm. shaft, sunk in the south gully, a cross-cut at right angles with the lodes has been driven to the north and to the south, within 6 and 8 fms. distance of two of them. From the north gully a cross-cut, 16 fms., is being carried on to intersect the lodes in that part of the hill. Thus, within a short time, three lodes with ore will be opened.

Wheal Watkins.—About 30 tons of rich silver-lead ore from this mine are in the course of shipment in the *British Sovereign*.

Rivershook Copper and Silver Mine.—This mine consists of two sections on the eastern banks of the River Torrens, about 8 miles from Adelaide, and 13 from Port Adelaide, to which place there is a direct road. It was purchased in January, 1846, by Messrs. Smith and Levi; and being then unknown as a mine, was secured at the upset price of 1*l.* per acre. Soon after its purchase, the proprietors succeeded in finding two good lodes of copper, one of which is upwards of 6 ft. in size, and the other above 3 ft. Running parallel with the latter lode is a lode of the richest silver ore yet discovered in the colony, which, on an analysis by Dr. Davy, has been proved to contain the enormous quantity of 637 ozs. to the ton of ore. The proprietors have suspended working for the present, and have, we are informed, sent a power of sale to their agent in London. This mine will, therefore, probably pass into the hands of some English capitalist.

PROGRESS OF FRENCH MINING INDUSTRY.

[From our Paris Correspondent.]

I did not write to you last week. I had begun my usual letter; but the excitement caused by the building of barricades before my windows, the roar of musketry in different parts of the capital, the alarming news which reached me every moment, and the indescribable terror and dismay which overhung the whole capital, rendered it impossible for me to proceed. How, indeed, could one write of mines in the very crisis of a tremendous revolution?—how think of business when the bleeding and the slain were brought into one's house, or exposed before one's window? Never in my life did I pass such awful and appalling days as those of Wednesday and Thursday last, and I devoutly pray to heaven that the like may never be seen again.

It does not enter within my province to give any details of the astounding events which have just shaken this kingdom to its very centre, and overthrown a monarchy that all the world thought as firmly established as any in Europe. But you will naturally expect from me some opinion as to the effect which this mighty convulsion has produced, and may be expected to produce, on business transactions, and more especially on those of which your Journal is the peculiar organ.

The effect, then, which this extraordinary and unforeseen revolution *has* produced, has naturally been most disastrous. It is no use to disguise facts—the effect has been really deplorable. The funds were so affected that those who were anxious to sell, though prepared to submit to a heavy loss, could not possibly reconcile themselves to the idea of accepting the very, very low price which those who were willing to purchase consented to offer. Thus, in point of fact, the 3 and 5 per cents. were literally without a price; and I believe that, since the 24th, no transaction has taken place in them.

With railway shares it was still more impossible for those anxious to sell—a very numerous body—and those willing to buy—a select and saving few—to come to anything like an understanding, owing to the very low figure at which alone the latter would think of treating—a figure so low that, sooner than accept it, it was much preferable to run every risk. —I did not hear that any transactions were attempted in metallurgic, coal, or mining enterprises; but if there had been, they would have been on more reasonable conditions than either the *rentes* or railway shares—for not only did mining enterprises, unlike railways, escape the popular fury (you will have seen that, in some railways, most awful devastation took place), but there is a security about them which railways and other enterprises do not possess, inasmuch as the demand for their products will be pretty much the same, though undoubtedly somewhat less, under whatever government may be established.

As to the effect which the great political convulsion may be expected to produce, it is impossible to deny, that for some time to come it will be very injurious to business transactions in general. Calm and confidence cannot possibly follow close on such a terrible tempest; and, without calm and confidence, all mercantile speculations necessarily suffer; but, judging from *present* appearances, this calm and confidence do not appear very distant—indeed, they have already returned to a certain degree. Thus far the people and the Government have acted with a moderation and wisdom that are absolutely astonishing, considering the (for them) great and glorious triumph they have gained. Though the police and the Municipal Guard—the mainstays of the late Government—have been swept away, public order is as perfect and as complete as it ever was—Paris, in fact, has so completely resumed its usual bustling and joyous air, that if a stranger ignorant of what had passed were suddenly to alight in its streets, he could never imagine that, in a wild burst of popular fury, a monarchy had been just destroyed, and a republic established.

If the people and the Government continue to follow the same admirable line of conduct they have done hitherto, it will only take a few weeks to restore confidence, and to remove all traces of the great convulsion. And from all that I see and hear, I am firmly convinced that the great object of both people and Government is, to continue to act with wisdom and moderation. Thus, you see both the present and future prospects are, on the whole, as satisfactory as could reasonably be desired, and ten thousand times more satisfactory than could have been expected under such extraordinary circumstances. I think, then, that such of your readers as have money invested in commercial enterprises in this country, would do well not to feel alarmed. Let them not think of getting rid of their shares and property at this moment, as, by doing so, they would not only have to submit to a great sacrifice, but would deprive themselves of all chances of profiting by the favourable prospects of the future, which *at present* exist, and which, judging from *present* appearances, really seem likely to be realised. *Hold, wait*, is the advice which a very experienced banker gave to a friend of mine only yesterday; and *hold, wait*, is what I would respectfully say to your readers.

That such advice is the best that could be given under the circumstances, is evident from the fact, that all the bankers and great commercial men are rallying around the Government. Rothschild himself, who, in this country, is all-powerful, has shown unbounded confidence in the new Government. Not only has he refused to leave France, as he was recommended to do by his friends, but he has notified his intention of fulfilling every engagement into which he had entered with the late Government, and especially of fulfilling the conditions of the last loan. He has also—so, at least, it is confidently asserted—placed a large sum (upwards of 1,000,000*l.* it is said) in the hands of the Government, by way of making manifest to all the confidence he feels. The example thus set by those who have really an immense stake in the country, proves the soundness of the advice—"Hold and wait." This example has already produced a most excellent effect in Paris, it having restored mercantile confidence to a degree which is really surprising.

But croakers will say, there are chances of domestic anarchy and foreign war. It is not, certainly, at all improbable, that the new constitution, which is now being drawn up, will not satisfy everybody—nor improbable, that the discontented may not, at the first, be indisposed to proceed to violence to attain their objects; but I certainly think, that the great majority of the people will approve whatever measure the Government may propose; or, at all events, will content themselves with making such alterations in it, as may appear to them to be reasonable. In that case, the Government would have such power, as to be able to suppress any disturbances immediately; and, therefore, the "anarchy," with which we are threatened, would, in reality, not be much more important than a London street row. No; for my part, I have little dread of monarchy—for I think the overwhelming majority of the people are not only disposed and even determined to be orderly, but are fully aware of the necessity of having a strong Government, and on that ground are prepared to extend to it their warm support.

As to foreign war, the general opinion is, that there is no present chance of it. England, of course, would never dream of attacking the French, because they have given themselves a Republican Government; Austria has Italy, and other disaffected provinces, to subdue and pacify; Prussia is not strong enough to think of entering single-handed into a conflict with France; and, as to Russia, she is too distant. France on her part, both people and Government, is fully determined to spare no exertions to maintain peace; and nothing less than a wanton attack on her independance will induce her to draw the sword.

On the whole, then, I advise hope, patience, and confidence. There is every reason why they should be entertained—not one why they should not. If, a week ago, any one had predicted that the monarchy would be annihilated, and a republic established, and yet that Paris would appear merely as active and as busy as ever, no one would have believed him; and why should it be worse hereafter, when assuredly no such crisis as we have just seen is to be expected? I, therefore, again say, "No alarm—wait—hold the shares and property that you have. Times are looking bright, and probably I will realise to promise they hold out; but whether they do or not, it is certain that you could not sell at a worse time than the present."—*Paris, Wednesday.*

† Metal for Gudgeons.—Cast-iron is inferior in cohesive force to wrought iron, but it possesses a valuable property which the other does not possess—viz.: that of not being acted on by the grease or oil employed for lubrication, and for that reason it is preferred by many experienced engineers. It lasts, besides, a very long time. Buchanan makes mention of a water-wheel at Deanstown, near Doun, which had run for nearly 30 years on pillows or bearings of cast-iron, with but little injury to the latter.—*Mechanics' Magazine.*

† Liquid Carbonic Acid.—The force exerted by this acid at the low temperature of 32° has been estimated to be equal to 35 atmospheres.

THE COPPER DUTIES QUESTION.

A meeting of the manufacturers of Birmingham, consumers of copper, was held in the committee-room of the Town-hall, on Tuesday last, to consider the propriety of taking steps to obtain a reduction of the duties on copper. There was a numerous attendance, amongst whom were Mr. C. Geach, the Mayor; Aldermen Smith and Martineau; Councillor Clifford; Messrs. W. C. Alston, T. Pemberton, D. Malins, B. Smith, T. C. Salt, J. Cartland, S. Whitfield, Blews, S. Tonks, J. Deacon, J. Collins, W. Barwell, R. Heaton, and many other gentlemen connected with the trade. Mr. W. R. Lloyd, agent to the British and Foreign Copper Company; Mr. Fleetwood, agent to Vivian and Sons; and Mr. John Barwell, agent to Simms, Willyams, and Co., were also present.

CHARLES GEACH, Esq. (MAYOR), in the chair.

The meeting was convened by the following address:—

TO THE MASTER MANUFACTURERS OF BIRMINGHAM, CONSUMERS OF COPPER.

Government having abandoned the only respectable argument (that of revenue) for maintaining the existing duties on copper ore—and, having decided to permit the importation of it into this country, but not to extend the license to copper also—it appears to me that we ought to take immediate measures for the protection of our interest as manufacturers. Being, as copper is, the raw material of nearly the largest number of the manufactures of this town and its immediate neighbourhood, and giving employment to our population equally, perhaps, with iron, it is of the greatest importance that every advantage in its purchase should be extended to us, which is possessed by the continental manufacturers, and those of the United States. I take the liberty, therefore (for which I hope my interest in the matter may be a sufficient excuse), of inviting you to meet in the committee-room of the Town-hall, at 12 o'clock, on Tuesday, the 29th day of Feb. inst., to consider and decide on the measures proper to be taken. HENRY SMITH.

Birmingham, Feb. 23.

The CHAIRMAN said there could be no doubt that taking the duty off the ore would not be of benefit to the manufacturer, as would generally be the case by taking the duty off the raw material. From the very nature of the smelting trade requiring a very large capital, and thus throwing it into the hands of a very limited number, it was a class monopoly. The benefit proposed by the Government would never reach Birmingham, in consequence of their still being a duty on the smelted copper, which was the raw material of Birmingham, as the ore was that of the smelters. He did not imagine when he read the Government proposition, that it was still intended to keep the duty on copper, and remit it on the ore—because he did not see how, consistently with their principles, the Government could do so. It was so notwithstanding; and it, therefore, only remained for Birmingham to go to the Government to show the effect of retaining the duty on finished copper was disastrous to them, and unjust in principle, to obtain what they met together to endeavour to secure—the remission of the duty on the copper as well as the ore. At all events, if the Government determined to persevere, or declined to interfere, he believed that the recognised principles upon which trade was now conducted, had a sufficient number of advocates in the House of Commons to prevent the tax being continued.

Mr. H. SMITH remarked, that the object of the meeting was simply this—to ask the question whether they ought not now to try to obtain all those advantages which extended to every other manufacturer in the country—he meant the purchasing of the raw material in the market of the world, and paying only that price for it which competition might fix. Under the present law they could not do so; they were entirely in the hands of the master smelters, who could do with them as they pleased. This, as many as the gentlemen knew, was no question to Birmingham. In former years, the course pursued by the companies in Cornwall and Swansea was found to be an evil of such magnitude, that several public companies were formed by subscription, entered into competition with those previously established, and thus in some degree mitigated the evil. It was quite unnecessary to say anything about the propriety of granting a monopoly, because much might be said about the necessity of encouraging and stimulating a young trade by protection; although he did not think that at the present day that argument could meet with much attention. But the case was changed when these establishments had arrived at maturity, when the supply was not only equal to the demand, but a great surplus was created and exported to other countries, there competing with what came from other quarters—thus lowering the price, and enabling the foreign manufacturers not only to compete with those of this country abroad, but to compete with them under their very noses in Birmingham. It was well known that a few years ago some relaxation was given, and copper was admitted at a certain duty. It was supposed that, to a certain extent, it would be productive of benefit to the consumers; but with the exception of some individuals, who undoubtedly derived advantage from it, it was not equivalent to what was paid for it. It did not find its way into the hands of the merchants, and thence to the manufacturer—but, on the contrary, generally passed into the hands of the smelters, who mixed it with their own ore; but, being accompanied by the monopoly they enjoyed, they could consequently ask any price for it they chose, by any increased demand, the manufacturers thus derive no advantage whatever on the reduction of the duty on the ore. This was the case till 1846, when Sir R. Peel, with a spirit that did him much credit, brought in his free trade measures. On that occasion they thought that the manufacturers of Birmingham should be placed in the same position as other branches of trade throughout the country; that they should be dealt with by equal laws. They expected that, from the soundness of the principles, and the power, ability, and character of the Minister, that they would not be disappointed. They did, however, suffer disappointment; and they found that Birmingham was still to be subjected to the laws of monopoly, in opposition to that principle which was declared to be the rule of the nation—that when the manufacturer should be subject to competition, he should also be allowed to buy his materials at competition price. Mr. Muntz, at his request, waited on the Minister on the subject; but he was informed that Government could not give up the 40,000*l.* per annum they derived from that source, even although Birmingham should suffer to that extent. Now, circumstances had again changed; more light had shone in on the present day, and the principles of free trade had been recognised. On that principle they should consider whether they would not take steps to bring the matter before Parliament as affecting their interests. It appeared to him that, forming, as copper did, the staple of the great bulk of the Birmingham manufactures—employing, as it did, the great proportion of the population—they had a right to claim the full advantage of this principle, and those acts which were extended to other trades. If he (Mr. Smith) understood the case right, it simply came to this, either that by the free importation of copper the interests of the smelters would be affected, or they would not. If they would not be affected, then there was no necessity for the law at all; but if they would, was it just to add the duty to the price of the raw material, to save the pockets of the smelters for the damage of the manufacturers and the people? There was no difference between the question of free trade as it affected the farmer and the smelter. Mr. Smith then alluded to the numbers engaged in manufactures into which copper entered, remarking that certainly as manufacturers themselves, they had a right to claim the same regard for their capital as was extended to Manchester, Glasgow, Sheffield, or Leeds; but when he looked to the working men—when he considered the little trouble they caused the Government, how intelligent and well-conducted they were, and how patiently they bore distress the most extreme—he did sometimes think that Government forgot their existence, and that they had a right also to enjoy those privileges which others were entitled to. He had made out a loose list, merely from recollection and off-hand, of different trades in Birmingham—not individual establishments—of which copper was the basis, to a more or less extent. He had reckoned 32 or 34 of them, and there might very probably be as many more. After alluding to the question of competition, of which he had no fears, feeling convinced that the British artizan could beat the foreigner, with all his advantages, provided the raw material was obtained on equal terms, Mr. Smith remarked that under the present laws they were now subjected to the competition of the French and German manufacturers. Supposing that he had to sell 100*l.* worth of goods in competition on the continent and at home, and for those goods he had to expend 90*l.* in raw material, and 10*l.* in labour—and supposing that the price of that raw material abroad was 90*l.*, and in Birmingham 95*l.*—he would, to meet competition, have to make a reduction of 5*l.* per cent. in the value of the labour. This was one law that affected them; but there was another. The smelters in Cornwall and Wales having a monopoly of the English market, sell all that they choose to send them, at whatever prices they might fix, and at whatever short credit they might choose to determine. Mr. Smith, after a brief recapitulation of all the arguments against the present system, concluded by reading a resolution in accordance with the tenor of his address.—Mr. J. PEMBERTON seconded the motion.

Mr. FLEETWOOD said, there existed some misapprehension as to the practical effect of the duty on foreign copper ore, for the duty did not affect the smelter, and the same relative value was offered for the foreign as for the Cornish ores—the advantage, therefore, goes into the pocket of the foreign miner. He knew a gentlemen who imported a lot of rich ores, which he had offered for sale in France and England; the price he was offered in France was 7*l.* or 8*l.* less than in England, yet he preferred selling it in France at the smaller price, that being more remunerative than the larger in England, less the duty. The total production of copper in this country was about 25,000 tons per annum, while the consumption in Birmingham alone was estimated at from 7000 to 11,000 tons per annum; the quantity of copper which was made abroad could not be more than 20 or 30 tons per week—while the quantity produced in this country was upwards of 400 tons weekly; there was, therefore, not much to hope from the importation of foreign-made copper. He believed the remission of the duty would beneficially affect them; immediately by increasing the price for continental manufactures, and ultimately by inducing a largely-increased importation of ores into this country.

Mr. W. C. ALSTON and others addressed the meeting.—It was agreed that a memorial should be presented to the President of the Board of Trade; and that, if necessary, a petition should be prepared, and presented to Parliament.

The proceedings concluded by a vote of thanks to the chairman.

The following is a copy of resolutions, as agreed to in the course of the meeting:—

That, whilst this meeting has learned with satisfaction the decision of her Majesty's Ministers, that the continued imposition of a duty, for the purpose of revenue, on the imported ore of copper, will be inconsistent with the interests of the country, it is of decided opinion that those interests will be but little, if at all, promoted, unless the free import of the metal also be permitted.

That, until the free importation of copper be permitted, any reduction of duties on the ore will be mainly for the advantage of the miners abroad, and the smelters at home, to the continued injury of the manufacturers and the public of England.

That copper, no less than iron, is the raw material of primary importance to the manufactures of this town and its immediate neighbourhood, and upon its application to the various wants of society are dependent a vast portion of the people.

That, upon the value of copper more than upon that of labour is dependent its continued and increased application to manufacturing purposes, and the consequent employment of an increasing working population; and whilst the manufacturing demand in the home market is always affected by any advance in its price, transactions with other countries are vitally injured by whatever influences its value in England, as compared with the market price abroad.

That, whilst English manufacturers have necessarily to encounter greatly increased competition abroad, it can be neither just nor expedient to expose them also, as by the tariff of 1846 has been done, to greater competition in the home market, whilst the price of their raw material is here increased by monopoly, and that of the continental manufacturers diminished, by the export of British copper in annually larger quantities, there to be sold in competition with that of every part of the world.

That this meeting, representing the greatest manufacturing interest of this town (now in a most depressed condition), is of decided opinion that to continue to prohibit the free import of copper will tend materially to paralyse the exertions of manufacturers, and to impoverish the people; that it will be inconsistent with justice and prudence, diametrically opposed to the principles of trade established in 1846, and, by interference with the supply of a most important raw material, essentially weaken that branch of manufacturing industry upon which vast multitudes are dependent."

CANALS *v.* RAILWAYS.—The Grand Junction Canal Company has, it is said, completed arrangements with the various canal proprietors between London, Manchester, and Liverpool, besides purchasing the various carrying establishments now on the line, as Pickford and Co., German, Wheatcroft and Co., and other carriers, with the view of becoming carriers, and have intimated their intention to carry bale goods between Manchester and London at 37*s.* 6*d.* per ton. Of course, this is in opposition to the railway company, who charge for similar goods 42*s.* 6*d.* per ton.—*Liverpool Advertiser.*

Original Correspondence.

EXPLOSIONS OF FIRE-DAMP CONNECTED WITH FALLS IN THE BAROMETER.

SIR,—I observe, in the *Mining Journal* of this day, a communication from Mr. Binney, of Manchester, on the very important subject of the barometer as an indication of danger in coal mines. Some time ago, while engaged in investigations, with reference to this subject, I obtained from Mr. T. Taylor (a gentleman well known in the Newcastle coal district) the following table, which I make no apology for submitting to you for publication. It seemed to me that the indications are, on the whole, too little exact to allow us to assume that an accident from explosion is unlikely to occur, because the barometer *does not change*. No doubt there are cases in which the falling of the barometer will show danger in fiery mines.

Allow me to remark, with reference to another subject—the Kinzigthal Silver Mines—that, in alluding to Mr. Hunt's lectures, I referred to the following paragraph, which I quote from the report in the *Mining Journal* for the 5th Feb.:—"It was not, however, the case that silver was exclusively united to those two metals (lead and copper), as it was sometimes found in a native state, and occasionally beside other minerals; still it was never found alone in quantities sufficient to be sought by independent mining operations." I did not, on reading the article, quite understand that the allusion was confined to the United Kingdom; but I most assuredly had no intention of throwing a doubt on Mr. Hunt's general accuracy—the object of my letter was simply to communicate information.

Gloucester-road, Hyde-park, Feb. 26. D. T. ANSTED.

State of the barometer on the days of the principal explosions which have happened in the Northern Collieries during the last 40 years; also, on the day before, and the day after, the respective explosions:

This account is compiled mainly from the register of weather observations, kept by the late Mr. Losh, at Gesmond Grove, near Newcastle, and from that of the Literary and Philosophical Institution of Newcastle:—

Date.	Collieries.	Killed.	Day before Explo.	Day of Explosion.	Day after Explo.	Wind.	Weather.
Sept. 25, 1803..	Wall's End	13	30·20	30·20	30·30	—	Fair.
Oct. 21, 1805..	Hebburn	35	30·25	30·20	30·15	N.	Fair.
Nov. 29, 1805..	Oxclose	38	29·90	29·40	29·03	E.	Fair.
Nov. 28, 1806..	Killingworth	10	29·90	29·93	30·03	S.	Fair.
Nov. 29, 1808..	Harraton	4	29·65	29·45	28·90	N.	Fair.
Sept. 14, 1809..	Killingworth	12	29·50	29·50	29·80	E.	Fair.
May 25, 1812..	Felling	92	29·90	29·85	29·80	W.	Fair.
Oct. 10, 1812..	Barrington Mill Pit	24	29·35	29·35	29·30	S.E.	Fair.
July 17, 1813..	Collingwood Main	8	29·50	29·70	29·85	W.	Fair.
Sept. 28, 1813..	Hall Pit, Fatfield	32	29·95	30·05	30·20	E.	Fair.
Dec. 24, 1813..	Felling	23	29·70	29·85	29·90	S.E.	Fair.
April 5, 1814..	Howden Pit, Percy Main	4	29·60	29·60	29·80	W.	Fair.
Aug. 12, 1814..	Hebburn	11	29·80	29·60	29·40	S.W.	Fair.
Sept. 9, 1814..	Leefield	4	30·00	30·00	30·00	E.	Fair.
June 2, 1815..	Sheriff Hill	11	30·20	30·10	30·10	S.W.	Fair.
Dec. 18, 1815..	Townley	1	29·90	29·15	29·20	S.W.	Fair.
June 30, 1817..	Row Pit, Harraton	38	29·65	29·60	29·35	S.W.	Rain.
Sept. 25, 1817..	Jarrow	6	29·80	29·80	28·70	S.W.	Fair.
Aug. 5, 1817..	Wall's End	4	29·80	29·80	29·80	S.E.	Fair.
Nov. 3, 1817..	Ouston	1	29·70	29·90	29·80	S.E.	Fair.
Dec. 18, 1817..	Plain Pit, Rainton	27	29·20	28·40	28·70	S.E.	Fair.
July 19, 1819..	Sheriff Hill	35	29·40	29·50	29·10	S.	Fair.
Oct. 9, 1819..	George Pit, Lumley	13	29·70	29·60	29·40	S.	Fair.
Oct. 19, 1821..	Nesham's, Newbottle	6	29·55	29·45	28·60	S.W.	Fair.
Oct. 23, 1821..	Wall's End	52	28·90	29·00	29·25	S.	Fair.
Oct. 23, 1821..	Felling	6	28·90	29·00	29·25	S.	Fair.
Feb. 21, 1823..	Ouston	4	29·60	29·00	29·15	S.E.	Rain.
Nov. 3, 1823..	Plain Pit, Rainton	59	29·90	29·60	29·40	S.E.	Fair.
Oct. 5, 1824..	George Pit, Lumley	14	29·30	29·10	28·70	S.	Fair.
Nov. 19, 1824..	Dolly Pit, Newbottle	11	29·15	29·50	29·40	S.W.	Fair.
July 3, 1825..	Julit Pit, Fatfield	11	29·80	29·65	29·80	W.	Fair.
Oct. 5, 1825..	Hebburn	4	29·45	29·55	29·55	W.	Fair.
Jan. 17, 1826..	Jarrow	34	30·85	30·25	29·95	S.W.	Fair.
May 30, 1826..	Townley	38	29·75	29·75	29·65	N.E.	Fair.
Sept. 5, 1826..	Heworth	5	29·50	29·55	29·20	N.E.	Fair.
Oct. 27, 1826.	Benwell	2	29·20	29·25	29·60	N.W.	Fair.
March 15, 1828	Jarrow	8	29·95	30·00	29·80	S.E.	Fair.
Sept. 1, 1828..	New Pit, Houghton	7	29·80	29·70	29·70	S.E.	Fair.
Nov. 20, 1828..	J. Pit, Washington	14	29·60	29·50	29·30	N.W.	Fair.
Dec. 3, 1829..	Willington	4	29·60	29·40	29·60	S.E.	Fair.
Aug. 3, 1830..	Jarrow	42	29·10	29·40	29·00	N.W.	Fair.
July 9, 1831..	King Pit, Wreckington	3	30·00	29·90	29·90	W.	Fair.
Sept. 20, 1831..	Willington	7	29·53	29·50	29·50	S.E.	Rain.
May 9, 1833..	Springwell	47	29·85	29·60	29·75	W.	Fair, wet n.
May 24, 1833..	Great Lumley	2	30·10	30·05	29·80	S.E.	Fair.
Nov. 1, 1833..	Black Fell	3	30·06	30·07	30·04	—	—
June 18, 1835..	Wall's End	102	30·09	30·11	30·10	—	—
Nov. 19, 1835..	Burdon Main	11	29·66	29·84	29·85	—	—
Jan. 28, 1836..	Down's Pit, Hetton	22	29·91	29·62	29·34	—	—
Dec. 6, 1837..	Springwell	30	30·37	30·12	29·80	—	—
Dec. 19, 1838..	Wall's End	11	30·31	30·22	30·20	—	—
June 28, 1839..	St. Hilda	51	29·89	29·68	29·95	—	—
June 16, 1840.	Haswell	1	30·05	29·87	29·83	—	—
April 19, 1841..	Bigge Pit, Willington	32	29·65	29·65	29·62	W.	Fair.
Aug. 5, 1841..	Thornley	9	29·60	29·32	29·48	S.S.E.	Fair.
Aug. 17, 1841..	Haswell	1	29·78	29·78	29·73	—	—
March 2, 1842	West Cramlington	1	29·21	29·48	29·63	N.W.	Rain.
April 5, 1843..	King Pit, Wreckington	28	29·29	29·44	29·58	W.N.W.	Fair.
Jan. 18, 1844..	West Moor	5	30·13	30·05	29·93	W.N.W.	Fair.
Sept. 28, 1844..	Haswell	95	30·012	29·852	30·122	W.N.W.	Chang'ble.
Oct. 15, 1844..	Coxlodge	1	29·92	28·83	28·82	W. by N.	Fair.
Dec. 1, 1844..	Seghill	2	30·18	30·15	30·07	S.	Dull.

NEW DISCOVERIES IN ELECTRICITY.

SIR,—I have read somewhat attentively an article, purporting to be extracts from a paper, by Mr. Baggs, on some new electrical phenomena submitted to the Royal Society, in your Journal of last week. I had never supposed that any modern electrician doubted that the explosive phenomenon of the thunder-storm was, in every way, analogous to that of the Leyden jar. According to the proposed theory, the thunder cloud is composed of a series of concentric belts, or zones, in alternations of positive and negative electricity—the central nucleus being the maximum; and the zone, farthest from the centre, the minimum of intensity. I have witnessed some phenomena, as well as made experiments, which seem to me to validate the inferences referred to. From 20 to 30 years ago, Miss Bennet, a daughter of the ingenious electrician, of Wirksworth—herself a good experimenter in practical electricity—not only showed me landscape pictures formed by electricity, and tinted with variously coloured powders, but gave me a specimen, illustrative of the phenomena thus elicited, on similar cakes of resin, from the contact of the balls of Leyden jars, charged positively, or negatively, as the case might be. One class of these phenomena exhibited a series of concentric rings—in some cases, to the number of 10 or 12—like those concentric circles that are displayed on the surface of water when a stone impinges on it. I am rather surprised, however, that there is no reference (at least, that I can find) to *induced electricity*—for, by the laws of induction, the opposite electricity must be invariably simultaneously excited; and its distribution in the cloud, agreeable to the assumption, will be a *necessary* consequence of the electrical excitation attenuating in intensity from the central focus of concentration. In former years, I was a keen and devoted practical electrician; among my very numerous manipulations, there was one experiment which I made, and which seems allied to the phenomenon under consideration. A large Leyden jar was charged, in the usual manner, from the prime conductor of an electrical machine; I then connected, by conductors, the external coating with the outer coatings of several other Leyden jars of various capacities. This done, by an insulated jointed discharger, I could distribute the contents of the large jar, as it were, *per saltum*, to each of these lesser Leyden jars; and the quantity communicated was found to be proportional to their relative capacities. I need scarcely say, the charge was supplied at once to each of these by forming a communication severally between their balls internally connected, and that of the large Leyden jar.—J. MURRAY: *Portland-place, Hull, Feb. 26.*

BLAST-FURNACE COAL—FORGE PIG-IRON.

SIR,—Would you be kind enough to inform me the price of puddling and blast-furnace coal in cargo; likewise, the average prices of the same during the years 1845, 1846, 1847; and what is the cost price for manufacturing pig and forge iron?—E. H. P.: *London, Feb. 29.*

[The questions are somewhat difficult to answer correctly—the prices differing according to locality; and our correspondent has not named any particular district. At the port of Newport, in Monmouthshire, large coals sell in cargo at from 9*s.* to 9*s.* 6*d.* per ton; and small ditto, 5*s.* to 5*s.* 6*d.*; and this has been about the average of several years past. It should be remarked, however, that every description of coal will not suit the blast-furnace—analysis should be appealed to before purchasing largely for this purpose. With respect to the cost price of forge pig-iron, it is, of course, continually fluctuating, according to trade, wages, and the consequent getting price of materials; 52*s.* per ton may now be considered a fair average cost at the works.]

THE OAK FARM IRON-WORKS.

SIR,—Having read with regret, in your last Journal, the letter from Mr. James Boydell (managing partner of the Oak Farm Company's Works, near Dudley), explaining some of the causes which had brought himself and partner into their present distressing situation—and which, I am sure, not only the creditors, but all the neighbourhood, would be most happy to see them relieved from—allow me to solicit your able support in vindicating the character of an honourable man, and also the assistance of your powerful pen, to urge, by persuasive means, the late partners of Mr. Boydell (noblemen and gentlemen of the highest standing in the land) to come forward, even at the eleventh hour, to save their partners from ruin, the creditors from heavy losses, and the works from being desolated by bankruptcy. Surely, this is not an unreasonable request, when we notice the large reduction in their liabilities since 1845, and the way in which the credit of the concern has been supported to the last by the retiring partners guaranteeing all creditors that the feeling of delicacy alone prevented them from remaining connected with it. I have myself seen a letter from the Hon. W. E. Gladstone, M.P., stating that their office of guarantee ended on the 23d November, only *three days* before the *final suspension of the concern*. I earnestly hope, then, for the sake of a few thousand pounds, which would make up 20*s.* in 1*l.* to *all the creditors*, and considering how closely the retiring partners are connected with the late affairs, and their own interest being to prevent the destruction of the property and works, that they will give their support to Mr. Boydell and the company, to prevent the ruin of the works. A CREDITOR.

Dudley, March 1.

THE USE OF STEAM IN THE MANUFACTURE OF SODA.

SIR,—While steam is receiving an extraordinary development in all departments where its mechanical properties are capable of yielding any useful results, its chemical nature, its powerful and extensive range of affinities, are wholly disregarded. The production of lighting gas by the action of steam on ignited carbon, and its subsequent enrichment in illuminating powers by passage through liquids, rich in carbon, has been strongly advocated at different times by several individuals; and, even though supported by practical experiment, it has failed to excite that interest it merits: also, the separation of sulphur from minerals by the same agent, beautiful and simple as the process undoubtedly is, has not received that attention it so justly demands. Though this indifference to its use exists, I beg to suggest its application to the manufacture of soda, in that department known as the "black ash, or fluxing process." The object here to be attained is, the deoxidation of the "salt cake," or sulphate of soda, which is usually effected by heating it with coal and lime. The carbon and hydrogen of the coal reduces the sulphate of soda to the sulphuret, which combines in part with the lime, forming sulphuret of calcium; and part remains with the soda, as bisulphuret of sodium. Besides the imperfection in the separation of the sulphur, large quantities of refuse materials are produced, requiring considerable space for their reception. Were the "salt cake" submitted to reduction with coal only, this accumulation would be prevented; and the sulphuret of sodium might be effectually decomposed by throwing a jet of steam over the reduced mass. The advantages resulting from this change would be, a smaller amount of materials to be operated on, a lessened consumption of fuel, and a perfect separation of the sulphur, which sulphur may be again burnt, and reconverted into sulphuric acid.—JOHN HOWSON: *London, Feb. 28.*

STEAM NAVIGATION—ELASTIC PADDLES.

SIR,—On looking at the relative velocities of the land locomotive and steam propulsion on water, it is impossible to avoid being struck with the great disparity between their progressive powers; and, as every knot per hour is of considerable importance, it is desirable that every trial should be made which science may suggest for an increase of speed in steam navigation. Air being an elastic fluid, requires an elastic plane, or sail, for the exercise of its greatest effect on wind-mills and sailing-ships. Water being also a yielding, though, when confined, a nearly incompressible, fluid, would also, doubtless, present the greatest resistance to an elastic plane—I, therefore, suggest the trial of India-rubber for spiral propellers and paddle-wheels. Long strips, or bands, might be stretched on iron or wooden-framed floats, or placed between those now in use; there should be a metal ringed-hole in the centre, to prevent the carrying up or over of the water which would rise in the hollow space, caused by the elasticity of the float. Conical elastic floats might also be tried, with holes at the apex. What is wanted is greater propulsive power, with less flowing water aft at a greater velocity than the speed of the vessel; and this would, in some measure, be effected by elasticity. Has a paddle-wheel, with radiating oars, ever been tried? Elastic ones might be experimented with, and a new form given to steam-vessels. Elasticity in floats would also cause less vibration in the vessel, to the great comfort of the passengers.

Penzance, Feb. 29. A. T. J. MARTIN.

NATIONAL DEFENCES.

SIR,—Observing, in the *Mining Journal* of the 19th ult., your review of a pamphlet on this subject, by Mr. W. Malins, I obtained one, have carefully perused it, and, I assure you, I cannot find that the author makes out a case to call for the necessity for any portion of the enormous outlay which his plan would entail on the country. Mr. Malins, it appears, is in the army; and, like many other of the would-be alarmists, is, doubtless, in hopes of a snug appointment under his new system of railway warfare, if any such preposterous undertaking should be adopted. France has now assumed the very form of Government which the writer of the pamphlet so much dreads as the precursor of an invasion of England; but, from the aspect of the political horizon, as far as can be seen at present, the change is likely to unite the two countries in a still closer bond of amity and peace. France has everything to lose, and could positively gain nothing by a war with this country; and it is a highly-interesting fact, as showing the national feeling towards us, that the most sedulous care has been taken by all classes, during the late struggle, to avoid the most distant allusion which could convey anything in the smallest degree like an insult, or offence, to England or the English; and the manly and straightforward declaration of Lord J. Russell, on Monday evening, in his place in the House of Commons, will cement the good relationship between us, which, I trust, will be perpetuated to future generations. It is the writers of such pamphlets, and inflammatory articles in the newspapers, who stir up unwelcome recollections, which otherwise would be buried in oblivion, and tend to bring about the very evils, in the avoidance of which they profess to be so anxious. England is now at peace with the whole civilised world; and, were her rulers unwise enough to show a disposition for warlike preparation, a very natural suspicion would arise in the minds of other powers, which it is much better to avoid. I feel satisfied, Mr. Editor, that we are not quite so defenceless as Mr. Malins would make his readers believe; but that should, unfortunately, anything arise to disturb the peace of Europe—of which I have not the least fear—Britain will take her proper position, and render a good account of herself in the eyes of the world.

March 1. PEACE AND PROGRESSION.

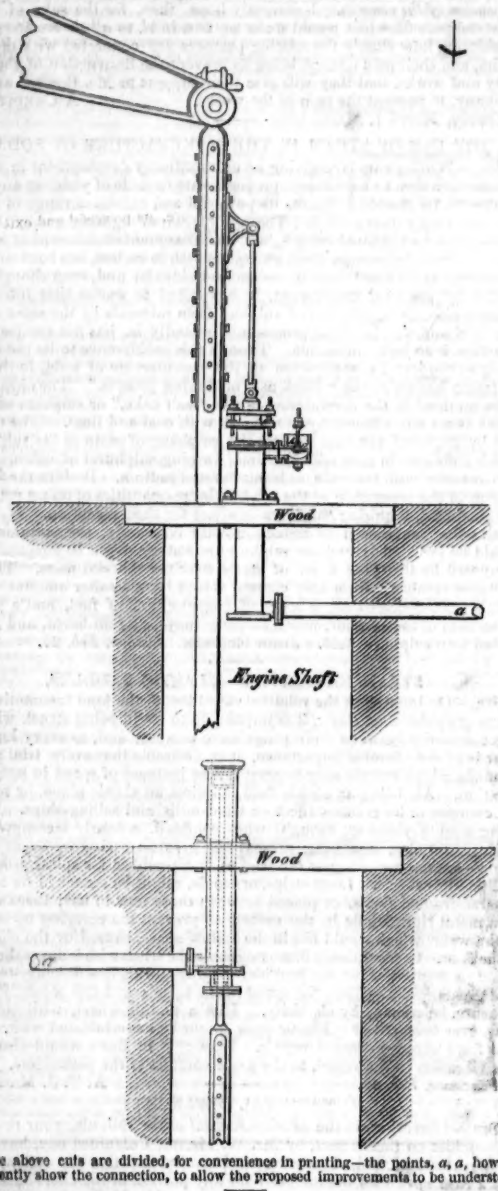
THE HYDRAULIC TELEGRAPH.

SIR,—Having attended the lecture on the hydraulic telegraph, on Thursday last, of which I see you have given a notice in the *Mining Journal* of Saturday, allow me to make a few observations on the subject, as a portion of Mr. Malcolm's remarks, as well as a letter of the patentee, in the same Number, are likely to mislead, on some of the most thoroughly-established and well-known facts in natural philosophy. It is stated in the prospectus, and repeated by the lecturer, that water is a thoroughly inelastic substance, and that the telegraph will act *instantaneously*, even if one end of the tube was in London, and the other at York. Now, Sir, from the experiments of many eminent chemists and philosophers, it has been proved, that water is, to some extent, elastic; and, consequently, under the enormous pressure required to move a column of water 200 miles in length, such elasticity would be effected, and the index would not point correctly. Even allowing that water is inelastic, the great pressure required to overcome the friction of water passing in the tube, to say nothing of that in every cylinder at the stations on the line, would inevitably burst any ordinary description of tubes; and then, how is the telegraph to be worked? The experiment of enclosing water in a globe of gold, and submitting it to pressure until the water oozed through the pores, given by the lecturer as a proof of the non-elasticity of water, has not been made for the purpose at all, but to show the porosity of the metals. While I admire the ingenuity and simplicity of the invention, I am thoroughly satisfied it can only be available for short distances—up to, perhaps, 8 or 10 miles—and in no case ought there to be intervening stations, but the pipe should go clear through from one index to the other. Mr. Malcolm was also wrong in stating, that by the electro-magnetic telegraph, there was no possibility of two or three pairs of stations conversing at the same time—why, by means of a deflector, the attendant at any station, requiring to

send intelligence, can isolate all but the one he requires; and while he is conversing, any of the intermediate stations can converse at the same time. Mr. Jowett, in his letter, says—"Taking that difference at 500 ft., the pressure of our piston, of ½ in. diameter, would be equal to 58½ lbs." Now, it is evident he has here taken only the actual weight of the water, and lost sight altogether of the hydrostatic pressure, which, on a column 500 ft. perpendicular height, must be enormous, and which alone would require a powerful steam-engine to raise 1 ft.—for, be it remembered, the hydrostatic pressure of fluids is the same, whatever the diameter, whether ½ in. or 100 in.; and a column of the former would balance and support one of the latter, were they connected together at the bottoms. I have no prejudice against the hydraulic telegraph, or its inventor, nor have I, as you know, any connection with the Electric Telegraph Company—an insinuation made after the lecture to a gentleman, who asked some simple question. In descriptions of inventions, I am anxious to see unvarnished, ungarbled statements, and request your insertion of this, to place, as I consider, the views of the subject in a right light. AN INVENTOR.

Regent-street, Feb. 29.

IMPROVEMENTS IN MINING MACHINERY.



[The above cuts are divided, for convenience in printing—the points, *a*, *a*, however, sufficiently show the connection, to allow the proposed improvements to be understood].

SIR,—I am not aware whether or not the invention I now lay before you has ever been suggested by any other person; at any rate, if so, it has never come under my notice. But as I consider it may be rendered very beneficial in mining, occasionally, if you think it deserving a corner in the *Mining Journal*, it is at your service, and also that of the mining world. We have frequently in our mines, arising from unavoidable circumstances, horizontal or flat-rods, as we term them, for the purpose of communicating power from the engine to some other part, or parts, of the mine for pumping; and, on some occasions, to a great distance. These rods are invariably a considerable impediment to the engine, causing great friction, and preventing the carrying out the principle of expansion of steam—so very desirable as regards the economy of fuel—and also very frequently causing hindrances, and thereby considerable loss, to the mine. In order to do away with these things, it has occurred to me that water should be substituted, as per sketch—it being exceedingly simple and effective, and may be applied to any situation—consequently, to any angle or curve. The plan, you will observe, is to have two pumps—one to be worked by the engine, and the other over the shaft or pit, where the power may be required in any part of the mine, and to be worked on the direct-action principle. The pipes, leading from pump to pump, to be about one-quarter the area of the pump—the weight being lifted on the out-door's stroke of engine, will not, I think, require larger; and, in order to prevent any inconvenience on the in-door's stroke, I would have a small valve, as at A, to admit air, provided the water should not follow fast enough on the in-door's stroke of engine, which air would be forced out on the return of the water, and the valve will be shut by the raising of the water. The same valve should also take in such quantity of water as may be a sufficient compensation for any loss by leakage. The advantages to be obtained by this mode of working are, that the whole of the work in any other part of the mine, to which it may be found necessary to communicate power, would be done by water-pressure, similar to a hydraulic or water-pressure engine—the spare power of the steam-engine acting as the column of water. The principle is easily rendered available underground, or on the surface, in whatever position it may be required; no risk of accidents by the derangement of flat-rods, bobs, &c.; and the engine to be worked, as regards expansion, as if doing the whole of the work in one shaft only.

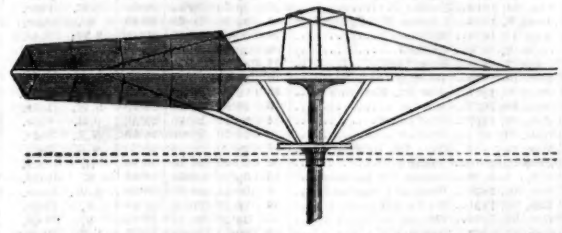
Redruth, Feb. 25. JAMES SIMS.

SANITARY REGULATIONS.

SIR,—The most efficient measures conducive to this noble purpose, will only be effected when the heads and hands of *all* are brought to bear on one common and well-directed effort; and not, as your correspondent, "X. Z.," in his eulogy of the one-sided notions of Mr. Wicksteed, would make us believe. The *Times* journal, ever inaccurate in matters of pure fact, observes, respecting the sewers, "exhaling the most malignant and poisonous effluvia." Now, let us contrast this with the fact, that where there is the most solid filth passed into the sewers, there do they and the drains *swarm with rats*—not by hundreds, but millions. Now, ammonia and hydro-sulphuric acid gases, and the vapour of hydro-sulphate of ammonia, will be found to be the only characteristic effluvia of sewage conduits, combined with oleaginous vapours, exhaled from decomposing animal matters, having a constitution somewhat similar to the organic radicals, ethule, methule, formule, acetule, &c.—and they are so corrected by the ammoniacal impregnation, as to be absolutely inert; and it is only where the entire animal carcase, from which the blood has not been taken, is left to putrify, that the sentiment of the following paragraph can be quoted as terribly true:—"There can now be no doubt, that putrid and eruptive fevers owe their origin to the reception, within the circulatory canals of the living body, of organic ferments, analogous, in their modes of action, to glutine, diastase, &c.; nor that these active sources of fermentative destruction and death are as surely possessed of a *vita propria*, analogous to, and holding a middle *rôle* between, the lowest forms of infusorial existence and the cereal granules, as they are derived from the last embers of animal life, whose natural decay is, by a sort of metempsychosis, to become merged, *in transitu*, in a lower order of organic power, instead of passing to a state of complete vital annihilation; and thus it is, that, from the time of the apparent death of an animal, to the hour when the soft parts have entirely disappeared, new forms of life-destroying organisms are continually exhaled from animal carcases, whose real source is the decaying germ of vital entity." To this source of destructive agency may, undoubtedly, be referred the insidious action of the emanations, evolved by the spongy soil of intermural, as well as extra-urban, cemeteries; and it is a well-recorded fact, that the plague was unknown to the pyro-sepultural nations and Egyptians, until the time of the cessation of embalming, and the initiation of the practice of animal sepulture; and during the English visitations of this terrible scourge, the excepted districts were the locations of fellmongers, tanners, soap-boilers, and other trade nuisances. Now, Messrs. Thenard, Chevalier, and Braconnot, have shown, by their experiments, that a mixture of one volume of sulphuretted hydrogen, with 250 volumes of pure air, is capable of killing a lean horse in one minute; one in 1000 kills a terrier in three minutes; one in 1200 a full-sized rat in 10 seconds; and one in 1500 a canary, in the same time. How, then, can *malignant* and *poisonous effluvia* be evolved from conduits of filth, or even to exist there *at all*, which are the place of birth, nursery, and residence of millions of little animals, whose strength is in proportion to their size? If "X. Z." will favour the Editor of the *Mining Journal* with the two reports of Mr. Wicksteed, alluded to in his paragraph, with power to lend them to me, I will engage to show the ineligibility of the plan in a general sense, as well as point out a method of sewage and drainage, at once cheap, efficient, and comprehensive—one that, with an outlay of 1,000,000*l.* sterling, would yield a net annual profit, from one-fourth of the metropolis, of 370,000*l.* per annum, and thus be capable, not only of making the same provision for the other three-fourths, but of repaying the entire outlay, and a handsome annual bonus to the contributors for ever, besides introducing a system of conveniences and comforts, to which London has ever been a stranger. This system depends on the use of a patent, claiming the use of animal matters, as a medium of illuminative gas manufacture, by which a system of scavengers would be organised, whose operations would completely prevent the entrance of any animal matters into the sewers, as possessing a higher value for the purposes of the patent.

Barnsbury Park, Feb. 28. WM. RADLEY, Ch.E.

BIDDLE'S PATENT ÆOLIAN ENGINE.



On the first appearance of this invention, we took occasion to bring it conspicuously before the readers of this Journal (see No. 565); and we are glad to find that the good opinion of it which we then entertained, has been fully borne out by the practical working of the machine. There seems to be no sort of reason why wind-power should be less desirable now than it was in past years. Steam, it is true, was to have superseded all other powers; and treatises have been published in works of considerable pretension to show how fortunes might be made by applying it even to the cultivation of the land; but, latterly, the enthusiasm as to its universal compatibility, has considerably abated. It is not used for raising water on railways; and it has been discovered that no power, which is a constant source of care, cost, and danger, can be employed with advantage in agricultural operations. Again—on the ocean, the great increase of steam has caused no diminution in the number of sailing-vessels; and on shore, where every wind is a fair wind, still less would the cheaper power appear likely to be supplanted. In point of fact, however, wind-power, as hitherto used, has been—power for power—far more expensive in the first outlay than steam itself, with the disadvantage of being limited to isolated situations and peculiar localities; yet, with these drawbacks, windmills, on the old cumbrous vertical plan, still continue to be erected, and may be found in the immediate neighbourhood of London, with little or no improvement on the fashion of five hundred years ago.

Previous to the adaptation of the steam-engine to general use, great efforts were made to obtain wind-power by horizontal, instead of vertical, action; and premiums were even offered for the production of a good working machine of this kind—but nothing resulted from it which the public would adopt; and, though since then, and within these few years, some great names have been associated with renewed efforts in the same direction, their inventions remain neglected or unknown. The great difficulties appear to have consisted in obtaining a sufficiency of power in moderate breezes, without liability to derangement, or mischief, from the most sudden and violent squalls from whatever point they might come; and it only requires to inspect Mr. Biddle's invention to be satisfied that these difficulties no longer exist.

The engraving prefixed to this article is a faithful representation of the appearance of a single Æolian engine in action, the eye of the spectator being in the direction of the wind. On each arm are two sails, which open or fold together like the covers of a book, of which the arm itself forms the back; each pair of sails is connected with the pair on the opposite arm, and placed at such an angle with them that they react mutually—so that when one pair spreads itself to the wind, the other connected with it must necessarily be closed; and, as the machine revolves, the sails return through the wind, without offering any resistance to it whatever. A flat steel bar is used as a connecting-rod, and when the pressure of the wind is more than they can bear, the sails relieve themselves. Nothing can be more simple, nor more certain, than its action; nor does there appear to be any limit to the power which may be obtained by it at a comparatively inconsiderable cost. We refer our readers to the advertisement in another column for further information, in the belief that an important destiny awaits this invention.

IMPROVEMENTS IN RAILWAY WHEELS.—A patent has been taken out by Mr. Newton, for a communication of a peculiar method of casting iron wheels for locomotive engines and railway carriages, the particular object of which is to cool uniformly all parts of the casting at the same time, and thereby prevent fractures in the wheel from irregular shrinking. From the time when wheels with a chilled hub and flange were first brought into use, the difficulty of casting them has been known, for the chill sets and cools the metal of the rim before the spokes or parts connecting it with the hub, and these, in cooling, shrink, and either break, or become so weak as to break on the least strain. To obviate this, the hub was for a long time made in sections, to enable it to open and yield to the contraction of the spokes, but this was attended with a diminution of strength, and the necessity of putting on wrought-iron hoops or bands. The patentee has sought to avoid these objections, which is effected by casting the whole wheel in a chill, and thus cooling all the parts at the same time, and without undue strain on any part. For casting a wheel of this kind a circular metal mould is to be constructed in several pieces, which, when put together, will leave an internal recess, or chamber, to receive the molten metal, corresponding to the figure of the intended wheel when complete. A quantity of molten metal being poured into the mould, the cast wheel will be produced, the inner face, flange, and outer periphery of the felloe being chilled and hardened by the cold metal surfaces, against which the molten iron has come in contact, and by which means all parts of the casting, as it cools, will shrink uniformly, and have no tendency to strain and crank, or separate one portion from another.

KILSBY TUNNEL—(*From a Correspondent*).—The work of relaying the rails in this tunnel has just been completed; the old stone blocks have been entirely removed, and both lines (amounting in the whole to three miles) have been relaid with new wooden sleepers. Although for 12 hours out of the 24, during the operation, the whole length of the tunnel has been worked as a single way, yet, through the excellent arrangements made, and by the aid of a new plan of electric telegraph, under Highton's new patent—which is much more certain in its operation than the old telegraph, and which was adopted by the directors especially for the purpose—not one train out of the immense traffic of the London and North-Western Railway has been delayed in any way during the progress of the work.

EASTERN ARCHIPELAGO COMPANY.

The events of the last few years in the East Indies, China, and the islands of the Pacific, have opened up a vast extent of territory to the commercial enterprise of England, which had previously been not only little known, but which was productive rather of annoyance, from being the harbour of pirates, alike remarkable for their ferocity and determination in their attacks on vessels unprepared for such assaults. The island of Borneo, in particular, has had an unenviable notoriety in this respect, but which now, through the exertions of Mr. Brooke, and the interposition of the English Government, is likely, with the adjacent island of Labuan, to become scenes of busy enterprise, and highly profitable results. We have before us the prospectus of a company under the above title, instituted for the extension of commerce in the China seas, and for promoting the civilization of Borneo, &c. This company has evidently been brought out under the highest commercial patronage, and its objects are to carry on mining, agricultural, and trading operations in the Archipelago, and the acquiring and disposing of lands in the island of Labuan and parts adjacent, abounding in mineral wealth, fertile in all the productions of the tropics, most advantageously situated for commerce, and possessing a healthy climate. The discovery of a coal-field of great extent on the main land of Borneo, a grant of which has been obtained, and which will be worked by this company, is, in itself, a fact of vast importance, and which alone would profitably employ a considerable amount of capital, as a continuous demand for this necessary article must always exist, by the steamers on the Indian and Chinese stations, both of the Peninsular and Oriental Steam Navigation Company, and those of the East India Company. This demand for the coal of Borneo must also greatly increase when several proposed regulations are carried into effect—such as steam communication between Singapore and Australasia, and, probably, at no far distant date, between the British settlements east of the Cape, and the western shores of North and South America. The coal has been used for steam navigation, and also analysed, and is pronounced to be equal to the best coal from the northern coal-fields of England; it extends throughout a district of 150 miles. The other general operations of the company will consist principally in agricultural pursuits, and colonising the island; a portion of territory has been fixed upon, admirably adapted for the culture of tobacco, coffee, sugar, cotton, nutmegs, pepper, rice, and the other usual productions of the tropics, and being most favourably situated for an extensive and highly lucrative commerce. Its proximity to extensively populated districts in Cochin-China, Sumatra, Java, Siam, &c., will afford the means for the introduction of labour to any extent which the company may require, and also facilitate the immediate colonisation and rapid extension of the company's possessions. Every possible encouragement will be given to the company by Mr. Brooke, the Rajah of Sarawak; and, by a treaty with the Sultan, many valuable privileges are secured. This company is forming under the most advantageous prospects; and, besides the great pecuniary benefits its operations will, doubtless, confer on its shareholders, it will tend to civilise an ignorant and benighted portion of the globe, and still further extend the humanising influence of English character and habits. The proposed capital is 200,000*l.*, in 2000 shares of 100*l.* each.

ALDRICH'S VACUUM PROPELLING-WHEEL.—Among the numerous descriptions of propellers, by which the objections to the common paddle-wheel might be removed, is one invented and patented by an American gentleman, and which he terms the "vacuum propelling wheel." Unlike the common paddle-wheel, they do not project beyond the bulge of the ship, but revolve in cases erected in the hold, and projecting through the floor of the lower deck; they are thus much more out of danger from shot than the ordinary paddles, and the floats work in the water beneath the bulge of the vessel a little higher than the keel, while the part within the case works in a vacuum. Aldrich's paddle-wheel has nothing complicated in its design or construction, is much smaller than the common paddle-wheel, and is capable of performing the same duty. The common wheel, throughout three-fourths of its circumference, is immersed in air, and not only is there a loss of all the power absorbed by the resistance of that medium, but the air is *driven* into the water before each float, diminishing the density of the mass of water, and, at the same time, is *drawn* in behind each float, both by atmospheric pressure and by the centrifugal force allowing the float to be detached from the mass of water behind it. This action compels the use of large floats, to take hold of a great quantity of the mixture of water and air-bubbles upon which they act. Now, with respect to Aldrich's vacuum wheel, however rapidly it may be driven, it is evident there can be no mixing of air and water, neither can the quantity between the immersed floats be diminished, the density and quantity of water acted upon being preserved without diminution; the resistance to slipping must, therefore, always be as the square of the space slipped over. The following are the advantages claimed by the inventor over the old paddle-wheel:—Working in a vacuum, it moves without resistance; mixes no air with the water; its centrifugal force increases, instead of diminishing, the quantity of water acted upon; and the diameter of wheel and size of floats may be greatly diminished, without impairing the propelling power of the wheel. Its advantages over the screw, he states, are—having no cumbrous shaft and appendages projecting from the vessel aft, and liable to injury from grounding astern; the backward velocity of the floats are twice that of the screw's fan; and the wheel need only revolve one-half as fast as the screw, to produce the same results.

IMPROVED CONDENSER FOR STEAM-ENGINES.—Mr. C. Schiele, of Frankfort-on-the-Maine, has secured a patent in this country for a new condenser for steam-engines, which, from its appearance, we should imagine will be highly effective. It is difficult fully to describe it without a diagram, but the general principles may be understood. The new condenser consists of a cylinder, one end of which is divided off, forming a separate chamber; the two chambers are connected by a valve in the partition, and a tube leads from near the bottom of the small chamber into the large one, proceeding along the upper part of the cylinder, and having its lower surface pierced with holes. The cylinder contains water, and on steam being admitted from the engine, it forces the water through the valve in the partition into the small chamber; but as soon as the steam begins to condense, and the pressure on the surface of the water is released, the compressed air in the small chamber forces the water up the connecting tube, and which, flowing along, passes through the orifices in a shower, and completes the condensation.

SULPHATE OF IRON FOR PURIFYING GAS.—M. Martens, the professor of chemistry to the University of Louvain, has made an interesting discovery in the use of sulphate of iron in the purification of coal gas. In his arrangement, the gas passes through two purifiers: in the first he places 1 cwt. of sulphate of iron, dissolved in 83 gallons of water, and in the second milk of lime, made by adding 83 gallons of lime to 375 gallons of water. On passing from the second purifier, the gas is so almost completely deprived of its sulphuretted hydrogen, that it scarcely changes the colour of paper moistened with a solution of oxalate of lead. Other great advantages are found to exist by the adoption of this method; there is an enormously greater deposit of tar in the solution of sulphate of iron, than when water alone is employed; and there is a much more abundant condensation of aqueous and ammoniacal vapours—so that during long-continued frosts, the pipes have been kept entirely free from ice, which causes considerable trouble and expense. M. Martens states, that the greater readiness with which the tar deposits in a ferruginous solution than in water, arises from the sulphate of iron having a greater affinity for the tar, which it condenses, and carries down with it; and the greater condensation of vapours contained in the gas, to be caused by a more complete absorption of ammonia, which always has a tendency to mix with other vapours. Whatever may be the chemical operations, the above quantity of 1 cwt. of sulphate of iron, in 83 gallons of water, is sufficient for purifying the gas from 25 to 27 tons of coal; the solution is then so impregnated to saturation, as to require changing. It is probable the residue of this plan may become a valuable article of commerce. At present there is little sale for the sulphate of ammonia in Belgium, and the residue has not been offered. The gas, from this mode of purifying, possesses high illuminating powers; and by the use of two sets of these purifiers, the sulphuretted hydrogen is entirely got rid of, and the gas burns with a flame clear, and perfectly white.

IMPROVED APPLICATION OF POWER TO MILLS, &C.—Mr. John Hastie, of Greenock, has taken out a patent for simplifying the application of steam-power to turn mills, by making the axis of the crank of the engine serve also for the axis of the mill—whether the same be vertical or horizontal. The shaft is provided with a fly-wheel, which receives an endless belt for driving flour-dressing machines, and their is an eccentric on the shaft for communicating motion to the slide valves. A governor of the ordinary construction, with revolving balls, regulates the motion of the engine. When two pairs of mill-stones are required to be worked by the same engine, it may be effected by causing the piston-rod to pass through both ends of the cylinder, and connecting it at each end with the shafts of the upper mill-stones; and, in case it should be at any time desirable to work only one of the upper stones, the other may be disconnected.

THE MAMMOTH.—As the labourers employed on the Stour Valley line were lately excavating in the parish of Lamarsh, near Sudbury, they discovered, about 14 feet from the surface, embedded in gravel, the head and tusks of a mammoth, or fossil elephant. The tusks broke when they attempted to remove them, but the teeth were taken out tolerable perfect; and, with the fragments of the tusks, are now in the possession of Mr. Fulcher, of this town. The teeth are about 10 inches long; the tusks, when whole, measured 11 feet in length, and the breadth between them was 4 ft. On two or three of the teeth the enamel is as fresh as if they had not lain in the earth a month. Teeth of the mammoth have also, at different periods, been discovered in the grounds of R. Allen, Esq., Ballingdon-grove, and also in those of W. Baker, Esq., Brunden Hall. The mammoth, or, as it is now universally denominated, the fossil elephant, is supposed to have existed about 6000 or 7000 years ago, approaching closely to, if not encroaching on, the era of man.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY	Asiatic—14, Grafton-street	2	P.M.
MONDAY	Entomological—17, Old Bond-street	8	P.M.
	British Architects—16, Grosvenor-street	8	P.M.
	Chemical—Society of Arts, Adelphi	8	P.M.
	Medical—Bolt-court, Fleet-street	8	P.M.
	Pathological—21, Regent-street, Waterloo-place	8	P.M.
TUESDAY	Linnæan—Soho-square	8	P.M.
	Horticultural—21, Regent-street	3	P.M.
	Civil Engineers—25, Great George-street	8	P.M.
WEDNESDAY	Society of Arts—Adelphi	8	P.M.
	Geological—Somerset-house	1	P.M.
	Graphic—Thatched-house Tavern	8	P.M.
	Pharmaceutical—17, Bloomsbury-square	9	P.M.
	Literary Fund—73, Great Russell-street	2	P.M.
THURSDAY	Royal—Somerset-house	8½	P.M.
	Antiquaries—Somerset-house	8	P.M.
	Royal Society of Literature—4, St. Martin's-place	4	P.M.
	Medico-Botanical—32, Sackville-street	8	P.M.
FRIDAY	Astronomical—Somerset-house	8	P.M.
	Royal Institution—Albemarle-street	8½	P.M.
	Philological—19, St. James's-square	8	P.M.
SATURDAY	Royal Botanic—Inner Circle, Regent's-park	3½	P.M.
	Westminster Medical—17, Saville-row	8	P.M.

On Mining, & the Practical Applications of Geological Science.

PROFESSOR ANSTED'S LECTURES AT KING'S COLLEGE.

LECTURE XIV.—MINING FOR METALS—INTRODUCTORY REMARKS—NATURE OF MINERAL VEINS—DISTRIBUTION OF MINERAL VEINS IN THE EARTH.

This important and useful course of lectures, which, during last term, excited so much interest, was resumed yesterday week, in the large theatre at King's College, by D. T. Ansted, Esq., M.A., F.R.S., &c., Professor of Geology, and Consulting Mining Engineer.

Professor Ansted commenced his lecture, by recalling to the recollection of his auditory that the portion of the subject left for the present term was that of Mining for Metals—strictly so called. The whole of the remainder of this course of lectures would, therefore, be entirely confined to that branch of the subject—comprising the various methods adopted, and the various practices to be found in different parts of this country, and of the world, connected with the actual search after metals; and also those facts relating to metallic ores, which were most important to know in this department of practical science. He need scarcely remind his auditory, that in various parts of the earth's crust were found certain mineral substances—small in quantity, as compared with the masses of rock in which they were found; but which, though limited in quantity, were often of great value, and which it was the object of the miner to search for. These substances existed in various states, and were interspersed among the various rocks of which the earth's crust was made up—so that it must be obvious, that, if it were wished to obtain them, indications must be searched for as to the circumstances under which they were likely to occur. These substances were distributed variously through the earth's crust; and, though rather limited in number, so far as important practical purposes were concerned, they were infinitely varied, if considered merely as curious minerals.

The main materials of the earth, consisted of limestone, sandstone, and clay—so, amongst these minerals, were found certain prevalent substances, in a crystalline state, and amongst them the most abundant were the carbonates and fluates of lime, the carbonates of barytes, and crystalline quartz. These were the predominating and most abundant crystals of the earthy minerals. They were associated with other substances, but most of all with metals—sometimes in a pure or native state; and in this manner were either disseminated or in crystals, or in irregular or jagged shapes, or sometimes in small particles, concerning which it was impossible to say whether they were crystals or not. They occurred also in the condition of the various salts of metals, oxides, sulphurets, and carbonates. These were the predominating forms. It would be found also that other substances, which were of importance as guides to the metallic veins, though of no value in themselves, were distributed in the masses of rock. The object of mining was to discover the various minerals—to learn where and how the more valuable were most likely to be found—and to determine the best means of removing them. The receptacles which contained the ore were of the nature of crevices in the earth's crust; and their contents generally offered a strongly-marked distinction, in crystalline form, to those materials which existed in beds and layers alternating with other beds of material not so valuable—these latter being almost always horizontal, or nearly so. The receptacles, on the other hand, were not horizontal, but mostly vertical. These crevices had very often been formed by contraction, as, when a mass of clay became dried, it was filled with cracks; and this was exemplified in the appearance of clay rocks generally, and when associated with sand, as they were often found in England. He might mention, as an example, the "fuller's earth," which happened to be a pure clay, and which showed this peculiarity of structure very well. In this clay there were often found crevices, on a comparatively small scale, which, no doubt, had been produced by contraction, and which were filled up by sulphate of barytes and lime.

Crevices were more or less continuous in their character, according to the nature of the rock in which they existed. These crevices were often partly or entirely filled up with substances obtained from the mass of the rock itself. Crevices were thus often nothing more than gaps, or clean openings, from the surface, and were then called "gash veins." This was the simplest kind of crack. It would be easily understood how this kind of crevice might sometimes be filled up rapidly with materials from the surface. The filling of crevices, occuring under other circumstances, required further explanation. Supposing, in a bed of clay, with sandstone above, and limestone below, a number of cracks were created by contraction—these must be different in number and kind in the different rocks—and, when filled, it was quite clear, might be filled in a very different manner. The great majority of crevices, however, were formed by mechanical disruption, and not merely by simple contraction. If the beds were forced upwards by any subterranean movement, it was easy to imagine how a number of fissures would be created.

The talented lecturer here illustrated, by means of diagrams, a variety of circumstances, under which the upheaval force would occasion different kinds of cracks, and distinct series of crevices. He also explained the possibility of these crevices being very much altered by the action of water.

When the disruptions, of which he had spoken, acted on an alternation of hard and soft rocks, empty chambers were often formed, in which distinct mineral matters might be accumulated. The water might bring down with it carbonate of lime, or silex, which, although formed from the rocks above, would then cease to have any relation whatever to them, but would be deposited, in some way, on the walls of the cavity into which they penetrated; and these latter might produce a chemical action, greatly affecting the condition of the accumulated substances. There was no doubt, that many fissures were thus filled up, and mineral veins formed. These chambers were also often produced by mechanical displacement. In the Government Museum of Economic Geology, whither he intended, before long, to accompany his hearers, there was a large collection of models, which illustrated these different movements.

The lecturer again referred to a series of diagrams, which represented the different varieties of crevices, and the circumstances under which they might be formed.

These crevices, fissures, or gaps, or whatever else they might be called, were, when filled with mineral substances, known to the practical geologist as *veins*, or *lodes*—terms which were used quite indifferently; in Cornwall they were called *lodes*, and in Derbyshire *veins*.

These mineral veins it was the object of the practical geologist and miner to discover, to recognise, and to determine the nature of. Their contents were chiefly important, when they were metalliferous. They occurred to some extent in every rock; there was scarcely any kind of rocks in which cracks were not met with; but there was a remarkable limit to the occurrence in these rocks of anything valuable—that being found under certain circumstances, and in certain districts. He should, therefore, say nothing except of those veins which were either themselves metalliferous, or which led to the discovery of veins which contained valuable produce. The metalliferous veins were limited in various ways. They were limited to certain kinds of rocks, and to rocks in certain conditions; they were limited also to veins having a certain direction; they occurred generally in rocks of igneous or metamorphic character, or where the two came into contact. There were important veins, also, in the aqueous rocks, but generally where they were in the neighbourhood of the igneous formations. This was the case in Derbyshire, Northumberland, and in some parts of Yorkshire. There were also found certain kinds of metallic produce in distinctly stratified rocks. These veins were limited to certain parts of the world—the distribution of which he should make a point of accurately describing, as it was an important part of the subject. In addition to the interest attaching to these veins, on account of their value, it would be seen, from this account, what relation they had to geological structure, to the various kinds of rock, and to the circumstances under which they made their appearance. If reference were made to the map of the world, it would be seen, that the districts he should mention, containing metalliferous veins, were very small, as compared with the whole extent of the land. In our own country, there were important districts in Cornwall and Devonshire. There the metalliferous veins were found in the granite, or in the argillaceous rocks in the neighbourhood of the granite. In North Wales, there were also large districts remarkable for the occurrence of metalliferous veins in the igneous and metamorphic rocks; and in the Isle of Man the same thing was repeated. In Derbyshire, part of Yorkshire, Northumberland, and Durham, there were extensive metalliferous districts, chiefly occupied by carboniferous limestone; but it was remarkable that the metalliferous produce was principally in neighbourhoods where igneous rocks had forced their way through the carboniferous limestone. In Cumberland, the metalliferous district was rather different, possessing far more igneous rocks than the other northern counties.

The conditions of the metalliferous formations in the Channel Islands were very similar. There were also a considerable number of veins in Ireland and Scotland; and here, again, they were always found in the granite, or immediately in its neighbourhood. The principal districts in Ireland were in the counties of Wicklow, Dublin, and Waterford. He would now pass to the continent of Europe. Rich metalliferous veins were found in eastern Belgium, connected with the igneous and altered rocks. In the south-east of France, there were also some very important veins; and, in the central departments, the district of the Vosges was the most celebrated—there, again, the metallic veins were manifestly connected with the igneous rocks. In Brittany, the conditions seemed to be a repetition of those of Cornwall and the Channel Islands. In Spain, the north-west and south-east portions contained many valuable metals, and a considerable district in the Pyrenees was also very rich. Here, again, in each instance, the lodes were found in the altered rocks, not far from those of an igneous origin. In the north of Germany and Saxony, there was an extensive range of mountains composed of granitic and altered rocks, known by the name of the Erzhgeborge, or Ore Mountains, in which there were large quantities of metals, and the Hartz Mountains were not less celebrated. In all these cases, again, the association of the granitic and igneous rocks occasioned an extraordinary prevalence of metallic veins. They must now pass on from the centre of Europe to the vast tracts of Scandinavia and Russia, where there were thousands and tons of thousands of square miles in which there were no igneous rocks, and, consequently, no metalliferous produce. In the south of Sweden there were mines which had been worked for a long time, also in the neighbourhood of the granite; but they had to pass from thence to the Ural Mountains before any important ores were to be met with. In speaking of central Europe, he should have mentioned the eastern side of the Alps contained metalliferous veins, which were always connected with the altered rocks common in that district; and in Hungary there were also very richly metalliferous tracts under similar circumstances. In Asia, there were veins of considerable extent, both in the eastern Ural, and in a range of mountains, which probably continued to bear metal even as far as China, where it was known a very large quantity of silver and lead was obtained, although he was not aware of the precise particulars. In the Malayan peninsula, there were the Tin Islands, and in the lower parts of India and South Australia were to be found a considerable number of metalliferous rocks. In all these cases, the metals were distinctly connected with the granitic series. In North America, there were extensive mining districts connected with the presence of igneous rocks in the districts of Lake Superior, in Canada, or of the Rocky Mountains. Mexico, Brazil, Chili, Peru, and other districts in South America, were remarkable for the same phenomena. He had particularly mentioned, in every case, the association of the metals with the igneous and metamorphic rocks, because that was a most important fact, and had evidently some relation to the process by which the crevices which he had described were filled.

If it were found that the substances, with which the crevices were filled, were invariably separated from the rock in which they were found, and contained materials, known to be distributed in the mass of that rock, it was quite clear that the filling up need not be derived from matter forced up from below, or filled in from above by materials transported from some distance. In cases where the veins did not reach the surface, the latter mode of filling up was manifestly impossible. There were some facts with regard to the position of metalliferous veins, which were very valuable. The cracks and crevices had always a reference to the rock, and they had definite bearings, according to their different grouping. Non-metalliferous veins also frequently existed at right angles with those that were valuable; and while the latter, which contained crystallised minerals, associated with metals, gave good indications of their being influenced by polar forces. The magnetic form of electricity had, in all probability, a connection with the origin of the veins. Another consideration of importance was, that these veins were always highly inclined, and often vertical. In the north of England this inclination amounted to more than 60°, but in Cornwall it was sometimes not more than 70° or 75°.

The lecturer then proceeded to describe some causes of confusion which existed, owing to the mechanical movements of the rocks containing veins having taken place at different periods, and having, consequently, dislocated the lodes. This was illustrated by a diagram, representing the formation at the mine of Huel Peever, in Cornwall. This was a case which very commonly occurred, and in which geological knowledge of structure was of the highest value. Professor Ansted concluded his lecture by a description of elvan dykes, which he described as broad crevices, into which igneous rocks had been poured, while in a melted state.

[The following lecture, in which were described the various phenomena of mineral veins, will appear in next week's *Mining Journal*.]

Improvements in the Manufacture of Bricks and Tiles.

A very numerous attendance of builders, engineers, brick-makers, and scientific men assembled in the theatre of the Western Scientific Institution, to hear a lecture on Legros' machine for making bricks and tiles by pressure, delivered by Mr. Schmidt, of 28, Sutton-street, Waterloo-bridge, who gives great promise of becoming a very popular lecturer. As the subject is quite original, and one of much interest, we are happy in being able to give the following ample report of the lecture:—

"You are, doubtless, all more or less familiar with the practice of making bricks—it is, perhaps, the most ancient of the arts; and if we have no evidence of bricks having been made by Adam, or his immediate descendants, at least we have Bible history to show us their partial use in the construction of the Tower of Babel. At the present day we have a vivid instance of the antiquity of brick making, in the bricks which are continually brought by travellers from the ruins of Babylon, the queen of cities. At a later period, we find the children of Israel, during their bondage in Egypt, principally employed in making bricks, and one of their great grievances to be the collecting of stubble out of the corn-fields, in order to mix with the clay, and to burn the bricks. In fact, in every country, where the first principles of society commence their organization, we find that there is an immediate attempt to mould the adhesive and plastic earths that we designate as *clay* into some kind of shape easy to be dried by the sun's rays, and which, when hard, are placed in layers, and made to retain their position by the addition of some softer preparation, which fills up the interstices, and afterwards becomes dry. As civilisation progresses, the art of burning the clay is next brought into action; and the primitive character of its atoms, greatly changed by the application of fire, rendering the product many more valuable qualities than in its original state. The operation of brick making is much the same in every country, and in every age:—the clay is dug out, broken into small pieces, saturated with water, which is left to evaporate, and when the residuum is sufficiently consistent, it is worked into an even mass by some kind of labour, made into suitable lumps, taken to the moulder, who forms and shapes the mass, then carried into the open air to dry gradually, being protected from the sun and rain, and, finally, when sufficiently dry, piled into a kiln to be burnt. There are different variations in different localities; but the principle and practice are essentially the same everywhere, from the earliest records of brick making down to the present time. In the neighbourhood of some of the large capitals, and especially of London, ashes are mixed with the clay; but this is done as much from motives of economy, and it is open to many serious objections, the bricks being always porous and light. Startling as it may sound in the present age of mechanical improvement, brick making may in general be considered as carried on much in the same way as it was thousands of years ago, and during this long period the art has made little or no progress from its primitive simplicity, and rudest of all tools and implements; and this observation we can all of us verify by looking around at the present operations of brick making, wherever carried on, in any part of the globe. In this business, the capitalist is completely under the subjection of his men, who, as a class, are not the most enlightened; and the moment that there is a greater demand for bricks, that instant the moulder and his men increase their prices, which are obliged to be conceded.

"Up to the present time many attempts have been made to introduce machinery into this important branch, which has become of greater value from the increasing number of houses, and the growing extent of railroads; but perfectly shaped bricks have never been produced with any degree of certainty, although draining tiles have been more fortunate in mechanical application; in fact, hitherto, all machines have been complete failures as to practical purposes, the mechanism being too delicate or too complicated for the coarse work it has to perform. Mr. Edward Legros, civil engineer, well known by his construction of several public works in France, seems to have resolved the problem—and, *at one leap*, to have brought the art of brick making from its stagnated position of centuries into the living age of mechanical application. Mr. Legros' idea is perfectly original, and, in its execution, it carries out a machine of immense power, yet so simple, that if a part be injured by its heavy work, the rest of the machinery will continue acting.

"Mr. E. Legros' principle consists in a new combination of the action of the lever—that most powerful of all mechanical powers; instead of moving the lever, he constantly shifts the fulcrum; by fixing two planes at different angles to each other, and forcing through them a piston, acting vertically upon the clay, he obtains his result; the upper plane is parallel with the horizon, the lower plane is inclined according to the degree of pressure determined upon; through these planes a box or mould is forced, whose top is open, but whose bottom is moveable, and slides up and down by the action of a rod or piston, furnished with a friction-wheel, which runs up the inclined planes. It thus evidently follows, that if the two fixed planes be at the one end twelve inches apart, and at the other only six, any body forced to progress between their inner surfaces will undergo a corresponding amount of pressure. You perceive, therefore, the immense power, but yet the simplicity, of this invention; and, if you will kindly permit me, gentlemen, I will endeavour to explain the several parts of the machine, or rather to carry you, in imagination, into the brick-field, in France, and of which we expect to have four or five in action in this country during the course of the ensuing season; and I think that this question will interest not merely the engineer, but that each one of you will understand the benefits that may be derived from the extensive use of these machines, as, by reducing the price of bricks, the cost of constructing railways and houses will be considerably diminished—and if, on any one article, a great saving in time and money is effected, it acts proportionably on every other branch connected with it. A technical outline of the construction may be briefly summed up as follows:—The waggons are divided by fixed vertical diaphragms into the required number of rectangular compartments, whose dimensions have been determined on, and in which the plastic materials are placed in order to be moulded; these compartments are fitted with moveable bottoms, capable of being elevated to the level of the mould, or depressed to a depth equal to at least one dimension of the required article. The vertical action of the bottoms is given by rods or pistons attached to them, which traverse through eyes, and render the moulding-box, in point of fact, a rectangular piston-chamber. These rods or pistons descend to within a short distance of the level of the waggon-wheels, and terminate in a cross-piece, to which small friction-wheels are attached, capable of revolving in the same direction as those of the waggon. These friction-wheels are acted upon at two distinct parts of the line of rails, which runs from the clay-pits direct to the drying-ground, passing through the buildings erected for any part of the operation; at these two parts there is an inner row of rails, one descending, the other ascending, thus alternately depressing or elevating the pistons, these changes being effected by short abrupt gradients. The bottoms of the moulds being brought to the level of the tops of the waggons, it is obvious that, on the trains arriving at the inner descending gradient, the pistons will descend, and thus open the moulds to the required depth. So long as the friction-wheels remain on the same level as the waggon-wheels, the pistons maintain the same position; but when the waggon reaches the point of the inner ascending gradient, the reaction takes place, and the friction-wheels force up the pistons to the required elevation. As our audience is not composed exclusively of practical men, you will, I hope, permit me to popularize the subject by describing a brick-field in full work. We will suppose the clay-pits, or strata of clay, to be at one end, and the brick-kiln at the other—that being the alpha and omega of our arrangement; from one point to the other light rails are laid down, supported on ordinary sleepers, as the weight of the waggons is very small. After having been unloaded in the drying-ground, the waggon is pushed forward to the sand-box. Before arriving there, however, you will perceive that there is one of the inclined planes. As the waggon, carrying eight or twelve moulds, passes this upright bar, it turns the fish-tail-like catch, and frees the pistons; the friction-wheels drop on the inner row of rails, and gradually descend to the required depth; here a boy sifts in the sand by a single touch of the handle, the waggon being kept in an exact central position under the sand-box, by means of an ordinary spring; the waggon is then pushed on to the filling place, where the men throw in the clay, and fill the hopper, and by a very simple movement of one man bearing on a lever, a scraper clears off the superabundant clay, and imparts, with the same action, a gentle pressure to level the contents of the moulds; the waggon is then pushed on to the pressing machine, the principle of which we have already described, its action is carried on by a double cog-wheel, and it only requires a motive power of two or three horses to work a machine making 40,000 bricks a-day; each waggon is fitted on each side with a double line of rack, so that there is one uniform progression; after the clay has been pressed into bricks, there is a second short gradient which forces up the bricks to the level of the moulds; the pistons and friction-wheels have now done their work; and this second upright bar turns the other side of the fish-tail-like catch, reverses the action, and hooks up all the pistons; the waggon is pushed on to the drying-ground, unloaded, and the operation recommences. Having thus endeavoured to give a clear idea of the whole process, I will now, if you are sufficiently interested, enter into a slight but necessary detail of some parts of the machinery, which has been made by Monsieur E. Belmer, a French mechanical engineer, established in this country, who has already executed many ingenious works; he has duly seized M. Legros' idea, and has produced this beautiful machine now working before you, which reflects the more credit upon him as it contains several new mechanical combinations. The sand-box has a double bottom—one fixed, the other acted upon by the handle; each plate is formed of alternate full and pierced parallelograms, on which the sand lies, which is sifted through the holes when the handle is pulled, and let the sand fall on a sieve—thus distributing the sand equally over the moulds. Each waggon is furnished in front with a pair of catches, which hook into a corresponding plate in the back of the preceding waggon, thus firmly uniting the line of double racks on the outside of each waggon; the self-attaching hooks are liberated by passing up this small inclined plane, and the waggons are then again independent of each other. We have here only six waggons at work, but, in a large field, the number of waggons is proportioned to the velocity and force of the motive power, and any number may be employed by increasing the number of filling places. Although these details may appear somewhat long, yet the mechanism is of the simplest and coarsest kind; the waggons and moulds are made of cast-iron, and the same model will serve as easily to cast a single one as one thousand; the wheels of the pressing-machine, the pistons, and friction-wheels, are of the roughest workmanship, and, far from having the great defect of most brick-machines, it can scarcely be put out of working order, as, supposing that a waggon be broken, the others continue their daily running, so that there is no single spring which may stop the whole of a large establishment until the machinery be repaired.

"Besides the advantages in the rapidity of moulding, the article produced is of incontestible superiority; the operations of washing and mixing serve to amalgamate the molecules of the clay, which has afterwards to undergo the process of evaporation before it can be used, thus taking a whole summer to produce the same effect that this machine does in a few minutes by immense pressure. The clay used by this machine requires no previous preparation; it is thrown into the hopper as it is dug out of the strata; and by the vertical pressure and progressive action, the molecules are amalgamated and laminated into one solid compact whole, free from all porosity. A few days' exposure to the air is all that is necessary to evaporate the humidity of the clay, which, in its natural state, absorbs little or no water; and whilst, by the ordinary plan, a rainy season will prevent the bricks drying for months, by M. Legros' system of pressure the bricks are ready to be burnt in a very short time after leaving the clay strata. When burnt, these bricks are as hard and sonorous as porcelain, perfectly free from cracks or pores, resisting water and damp, and resemble, in many respects, the ancient Roman bricks, which seem almost indestructible; the beauty of their angles, also, can be put into comparison with the ordinary run of bricks.

"The present machine is one-fourth of the linear scale, or one-sixty-fourth of the cubical scale of the large machine, making 40,000 bricks in a working day of ten hours, with a motive power equal to three horses, or about 6,000,000 bricks during the six summer months. The cost of erecting the machine may be about 400*l.*; taking the interest, repairs, reimbursement of capital at the large rate of 20 per cent., we have, for first expenses of the 6,000,000 bricks, 80*l.*; the cost of a small engine will be about 100*l.* to 120*l.*; interest, repairs at 25 per cent., 30*l.*=110*l.*; or, distributed over 6,000,000 bricks, not quite 4*d.* per thousand. The fuel for this small engine will not exceed 2½ cwts. per 10 hours; and a man's wages, at 4*s.* per day, say 6*s.* 4*d.* per day, for the 40,000 bricks moulded daily, or not quite 2*d.* a thousand. Thus the entire expenses for moulding, fuel, wages, interest, &c., will only be 6½*d.* a thousand on this sized machine. Now, let us look at the relative expenses of moulding by hand, which are fixed prices arranged in the trade, and that without calculating the immense loss of interest on dormant capital, both in the clay and brick, and the greater rent to be paid for a larger drying-field, whilst the bricks are waiting the pleasure of the sun's rays in this uncertain climate, where moist particles are always more or less floating in the atmosphere:—Digging out of beds and carrying clay to pug-mill, 1*s.* 2½*d.* per 1000; mixing in pug-mill, 1*s.*; carrying clay from pug-mill to the moulder's table, 5*d.*; preparing clay for the moulder, 6*d.*; moulder, 1*s.* 6*d.*; placing bricks on track, sanding, 2½*d.*; carrying to drying-ground and walling, 1*s.* 2½*d.*—6*s.* 0½*d.* per 1000. Now, the same operation performed by the pressing-machine, gives the following results:—Filling the waggons with clay, 6*d.* per 1000; carrying by rail, and walling by hand, 10*d.*; interest and expenses as above, 6½*d.*=1*s.* 10½*d.* per 1000, being a clear difference of 4*s.* 2*d.*, or more than 4*s.* per 1000, in moulding alone, whilst the moulder can only make 6000 to 8000 a-day, the machine will make in the proportion of 7 and 5 to 1 at the least. In the neighbourhood of London alone, about 1,200,000,000 of bricks are annually made, on which a saving of 250,000*l.* or 300,000*l.* might be effected by using M. Legros' machine."

We have been informed, that a company is being formed for the purpose of making these machines, and thus to sell them at a considerably diminished price; however, any information will be given by Mr. Schmidt, at his office.

INSTITUTION OF CIVIL ENGINEERS.

FEB. 29.—JOSHUA FIELD, Esq. (President), in the chair.

The proceedings were commenced by reading communications relative to Mitchell's screw piles and moorings, from several engineers and naval officers, who were prevented by absence from giving their personal testimony in favour of what they termed "this most useful invention."

Mr. W. A. BROOKS gave an account of the method of laying down the moorings at Newcastle-on-Tyne, under his directions. A heavy chain, formed of 3½-inch round iron, in links of 3 feet long each, was stretched along the bed of the river, in the direction of the current. To this chain, beneath each tier, was attached a 2½-inch mooring-chain, fixed to the head of a screw mooring; another screw being also placed beneath each tier, and driven down between 10 and 20 feet into the clay, and sometimes full a foot into the shale rock. The screws were 4 feet in diameter, and were placed in depths varying from 15 feet to 24 feet at low water spring tides. They were screwed down to the depth of 15 feet in an hour and a half, and sometimes 21 feet in two hours. Each mooring screw was intended to have borne the strain of four heavy ships; but, during the last winter, the port was so crowded, that more than double the proper number of vessels were moored upon each; and yet there were no signs of weakness; and whilst nearly 30,000*l.* of damage was done at Sunderland, during a heavy storm, no casualities occurred at Newcastle, which Mr. Brooks stated was entirely owing to the sound holding of the screw moorings. He argued, therefore, that the small sum of 2500*l.*, paid by the harbour commission of Newcastle for the right to put down these moorings, was a very wise expenditure.

Mr. T. SMITH, Pilot Master of the Port of Shields, corroborated Mr. Brooks's statement.

Captain WASHINGTON, R.N., had, in the course of his surveying duties, seen the screw moorings in almost every position, and had heard them universally eulogised, as being the best and safest moorings hitherto known. He strongly recommended their employment. He had also examined carefully the screw pile lighthouses, and had every reason to be satisfied with them, as affording a means of placing lighthouses and beacons where they were before impracticable, and enabling floating lights to be generally superseded by fixed lights, which latter he proved, from documentary evidence, to be one-third less annual cost than the former, and certainly more useful to sailors; for, in spite of all the care, attention, and even lavish expenditure of the Trinity Board to moor the lightships securely, they did go adrift just at the time they were most required. He, therefore, advocated fixed lights in every situation where a foundation could be obtained; and he believed that, with the screw pile, there were scarcely any situations where this could not be accomplished. Messrs. Walker, Cubitt, Rennie, Murray, Moorsom, Mitchell, Scott Russell, and others, took part in the succeeding discussion, adducing instances of the efficiency of the moorings and the piles, and of their applicability to numerous engineering works, for which they expressed their intention of employing them. It was stated that the high price hitherto charged for the right of using them had somewhat retarded their general introduction; but it was explained, that Mr. Mitchell had feared to entrust to others the fixing of them, lest a failure might ensue before his system was perfected, which, however, he now thought it was. Now, however, as the right of granting licenses for their use was transferred to men of business who had purchased it, there was no doubt of their being brought within the reach of every application.

The paper read was entitled "Remarks on the Formation of the Entrances to Docks, situated upon a Tideway," By Mr. J. B. Redman, M. Inst. C.E. After illustrating the subject by the example of the position and direction of all the principal dock entrances on the borders of the Thames in the port of London—showing that the variation in the opinions and practice of engineers had been very great—it detailed the ordinary methods of docking and undocking ships, and the precautions to be taken in constructing entrances, which should be best adapted for facilitating these operations; and, although it was difficult to lay down any positive rules upon the subject, as the engineer must, in almost every case, be guided by local circumstances; in all ordinary cases, the following general rules were recommended:—For graving docks, an angle of about 45°, pointing up the stream; for wet docks, an angle of about 60°, in the same direction; and a right angle, with the stream, for building ships. These, it was believed, would be generally found the most available. The discussion upon the paper was deferred until the next meeting, of Tuesday, March 7, when the monthly ballot for members was announced to take place, and the following paper would be read: "An account of the effect of a heavy storm on some Sea Walls of different forms, as illustrating the principles of the construction of Sea Defences." By W. J. M. Rankine, M. Inst. C.E.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, No. 2, Moorgate-street, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 6*d.* 46

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 47

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c. PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 48

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK, Goswell Mews, Goswell-road, London.

TO ENGINEERS, RAILWAY AND STEAM-BOAT COMPANIES, AND THE OWNERS OF STEAM-ENGINES IN GENERAL.

W. & C. MATHER beg to call the attention of the above parties to their PATENT ELASTIC METALLIC PISTON. 49

From the great satisfaction it has already given, they can, with confidence, recommend it. The following are some of its excellent properties:—

1. The great, equable, and mild elasticity: its being perfectly cylindrical and self-adjusting—thereby enabling it to yield, with the least possible friction, to any inaccuracies of the cylinder, whether oval or taper.

2. Its extreme simplicity and lightness—the packing consisting of ONLY TWO PIECES OF METAL, having vertical and horizontal elasticity in due and proper proportion, independent of each other—the horizontal elasticity being also independent of SCREWING DOWN THE JUNK RING OR COVER.

3. It takes the least possible space; and is, therefore, well adapted for air and water pumps.

The above patent was unsuccessfully opposed by Mr. Goodfellow, the patentee of a piston, having *three angular rings*, of a bevil form.

The Solicitor-General conceived that there was not the slightest similarity between them, as may be seen from the subjoined letter from Mr. Carpmael, through whom the patent was taken.

W. and C. M. can refer to upwards of 100, made since the date of the patent (April, 1846), each of which is giving entire satisfaction. They beg to call attention to the fact, that, in a number of cases, they have replaced those made of *three annular rings of the bevil form*, a description of which appeared in the *Mining Journal* of Saturday, October 3, 1847.

[LETTER REFERRED TO.] *April* 2, 1846.

DEAR SIRS,—Mr. Solicitor-General took the hearing in your patent yesterday, at the Privy Council, and decided that the invention did not *interfere*; we are, therefore proceeding with the patent. We are, your obedient servants,

Messrs. Mather. POOLE & CARPMAEL.

The object of publishing the above letter, is to convince parties wishing to use W. and C. Mather's piston, that they have nothing to fear from the caution which accompanied the advertisement referred to, or the unfounded reports which are industriously circulated from the same quarter.

Locomotive and other pistons guaranteed *for twelve months*.

Salford Iron Works, Manchester, Sept., 1847.

NATIONAL DEFENCES. By WILLIAM MALINS.—A PLAN, submitted for the consideration of Government, whereby any required Force, of the heaviest Artillery and Troops, may be concentrated at the point of danger, so as to arrest a hostile Fleet under the Fire of Moveable Batteries, traversing on a Rail-road at High-water line of Coast, where available. The Electric Telegraph, carried along the same line, would convey notice of the approach of an enemy. From the Harbours of Refuge, Block-ships and Steamers might quickly arrive to attack the enemy in flank and rear, and thus between two fires destroy him.

Published by J. Ridgway, Piccadilly; E. Wilson, Royal Exchange.—Price 1*s.* 50

The Metallurgical Treatment of Ores.

[*Continued from February* 19.]—No. XIII.

Rough Fusion.—Ores containing no lead, and which are poor in silver, as well as poor copper ores, are subjected to this process, mixing them with a suitable quantity of pyrites, or pyritous minerals. The operation is carried on in a half-high furnace (corresponding to our slag-hearth), which is generally kept in use for three months successively. The hearth of the furnace is destroyed and remade at the commencement of each fusion. It is formed of a lining of charcoal, beaten on a clay base, which latter rests on a layer, or ed, of slag. The basin into which the fused mass is run, is also lined with charcoal. All being thus prepared, the furnace is slowly heated by means of charcoal and turf, in order to dry it thoroughly; it is then filled with charcoal, and the charge commenced, by throwing in some slag and charcoal; at which time the blast is opened into the furnace, and the fusion process commenced by adding the ore.

When every thing goes on favourably, the fused mass is run off about six times in the 24 hours. The constituent parts of the rough matt, or regulus, are generally sulphur, a rsenic, iron, lead, copper, and silver. The following analyses exhibits the composition of a regulus, produced from poor ores:—

Iron, 58·50; lead, 9·23; zinc, 2·30; copper, 3·11; antimony, 1·4; sulphur, 17·00; arsenic, 5·30; silver, 0·20=97·04. The regulus obtained from poor ore, with the addition of pyrites, contained—Iron, 59·00; lead, 13·25; zinc, 3·00; copper, 2·00; sulphur, 18·75; arsenic, 2·00; silver, 0·14=96·14.

The slag adhering to the tap-hole of the furnace, and the vessel receiving the fused regulus, is detached, and re-fused; and the clotty, badly fused, masses adhering to the sides and hearth of the furnace, and which are mixed with some of the charcoal lining, are taken out when the furnace is cleansed and stamped, washed, and then fused.

Lampadius found, in the slags from the rough fusion of an ore of Untermuld—protoxide of iron, 53·40; baryta, 6·01; alumina, 4·11; lime, 3·15; oxide of zinc, 3·02; silica, 26·13; sulphuric acid, 2·12=97·94. And in the slag of a rough fusion, of the slags and amalgamation residues of Halsbrucke, were found—Protoxide of iron, 49·00; baryta, 4·53; alumina, 4·50; lime, 3·40; oxide of zinc, 2·50; magnesia, 1·00; silica, 32·02; sulphuric acid, 2·10=99·05. From these analyses we can establish an exact theory for the rough fusion, or obtaining a matt, or regulus.

It may be seen, that the purpose of this operation is the obtaining a matt, or mixture, of divers sulphurets, all containing silver, and a slag, which contains all the earthy matters, besides a portion of iron in the state of protoxide. Formerly the ores from which a regulus was to be obtained were never roasted; it is not so, however, at present, from which two formerly distinct operations have been confounded—viz.: the rough fusion and the concentration fusion. For instance, it is advantageous to roast pyritous minerals, in order to oxidise a portion of the iron, which then can fuse with the slags, and thus the obtained regulus is reduced to a mean richness, analogous to that produced from an ordinary ore by the usual regulus process.

The following are some practical rules followed at Freyburg in carrying out the rough fusion, properly so called. The following ores are worked:—

1. Ores, poor in silver and lead, and containing at most ·00156 of silver. These ores are all, more or less, pyritous; they are divided into three classes, according to their yield of regulus. The *poor ores*, which give 40 per cent.; the *poor pyritous ores*, which give from 40 to 80 per cent.; and, lastly, the *pyrites*, which give 70 per cent., but which contain no more than ·0003 of silver.
2. Lead ores, containing 16 per cent. of lead, and little silver.
3. Copper ores, containing less than 8 per cent. of copper, and at most ·00156 of silver.
4. Non-argentiferous pyrites, which determine, when necessary, the formation of regulus. The mixture of these different ores is calculated to contain ·0005 of silver = about 13½ ozs. in the ton.

It can be readily supposed, that the nature of the gangues must be taken into consideration, for it is necessary to obtain such a mixture of earthy matter, that it will readily fuse. At Freyburg the mixture employed is two-thirds quartzose ore, and one-third non-quartzose ore, containing carbonate of lime, fluoride of calcium, and sulphate of baryta. The use of lead ores in this operation is avoided; and ores containing antimony, zinc, or arsenic, are preferred. The violent heat which is necessary for the success of the operation, occasions a loss of the lead; whilst, on the other hand, it has the advantage of freeing the regulus from the larger portion of the more volatile metals, which are reduced in the course of the operation. The argentiferous pyrites matt, the result of the preceding operation, is generally employed in fusing lead ores; but it often happens that it must be treated separately, and then various methods are had recourse to. The first consists in fusing the pyritous regulus with poor ores, which are yet too rich for the rough fusion, and too poor to be treated as lead ores: they contain about ·0025 of silver. This operation is made for the purpose of diminishing the bulk of the regulus, and augmenting its value in silver, and diminishing the large quantity of slag which the rough fusion produces in working lead ores. The poor ore used contains about 20 per cent. of lead; copper ore is also used—it must have the same value in silver, but must not contain more than 8 per cent. of copper.

The regulus to be enriched undergoes three roastings; it is then fused in the before-described furnace, with the poor ore suited to the purpose, the operation being conducted in the same manner as the ordinary regulus fusion. Now, slags are formed together with a regulus richer in lead and copper, and poorer in iron—the latter metal having entered into the composition of the slag as protoxide. Latterly, a new method has been introduced—the ores are roasted and mixed with from 20 to 25 parts of litharge, and a considerable quantity of lead slag; the mixture is then heated, when it undergoes a true scorification, the product being an argentiferous lead; this method is, however, much more expensive.

Roasting the Regulus.—This operation is indispensable, in order to enable the regulus to play an important part in the fusion of plumbiferous ores. The iron, becoming oxidised, readily separates from the other metals present, facilitating the fusion of the slags. The crushed regulus is three times roasted, with free access of air. The regulus is afterwards fused with argentiferous galenas, and with poor ores, rich in silver. The roasted regulus contains:—Protoxide of iron, 78·01; oxide of lead, 9·12; oxide of copper, 3·18; oxide of zinc, 2·20; oxide of antimony, 1·46; arsenic acid, 1·72; sulphuric acid, 2·70; silver, ·19 = 98·58.

Fusion of the Lead.—This is an essential operation of the general treatment; it is effected on roasted ores, mixed with the roasted regulus produced in the preceding operations. The ores treated in this manner are:—1. Silver ores containing very little lead, copper, or pyrites, but containing more than ·00157 of silver.—2. Ores containing 16 per cent. of lead, and more than ·00156 of silver.—3. Ores containing from 30 to 80 per cent. of lead, and ordinarily ·005 of silver, or even less.—4. Copper ores containing about 4 per cent. of copper, and ·00156 of silver, or even a little more. All these ores are roasted, in order to free them from sulphur and arsenic, and to oxidise the iron and other metals they may contain. The necessary mixture of the different ores is divided into quantities of 6 cwts. each, which are roasted in the same manner as the ores for amalgamation, with the exception that no salt is used. Each lot of 6 cwts. is roasted, until no more sulphurous acid is perceptible—this operation lasts about five hours. The chemical changes which take place during this roasting can be expressed in a general manner; but analytical details are wanting, to render the theory perfect. The ores employed contain sulphuret, arsenuret, and antimoniuret of silver, sulphurets of iron, lead, copper, and zinc; arseniurets of nickel and cobalt; and, lastly, earthy matters. After roasting, the mixture ought to contain oxide of lead, sulphate of lead; oxides of copper, zinc, iron, nickel, and cobalt, arseniates of these various metals, earthy sulphates, and unacted on earthy matter and ore; however this may be, it can be readily seen that the result of the roasting is the conversion of the arsenic into arsenious acid, which is given off, and into arsenic acid, which remains in combination with the bases; of the sulphur into sulphurous acid, which is given off, and into sulphuric acid, which combines with the oxide of lead and lime in the formation of a certain quantity of oxide of antimony, which is volatilised, as also oxide of zinc; and, lastly, silver. When roasted pyrites matters and roasted lead ore have been obtained, the lead fusion is proceeded with. This fusion is effected in similar furnaces to those in which the regulus fusion is made, but so arranged, that a high a temperature need not be obtained. The furnace is longer and deeper in the neighbourhood of the tuyere; harder coke is used, and, lastly, less blast is employed. These precautions are highly necessary, in order to prevent the volatilisation of the lead. The charge is from 30 to 40 tons of roasted ores, 18 tons of roasted pyritous matters, and from 3 to 4 tons of slag at each fusion; the plumbiferous matts of a preceding fusion are again worked, as well as litharge, cupel bottoms, and other products containing lead, which have to be operated upon. The furnace is tapped thrice in every 24 hours, silver-lead matts and slags being the products. In the theory of this process, there is nothing very worthy of notice, it having been fully discussed and explained in our articles on the smelting of lead. It must be observed, however, that owing to the presence of a very large quantity of oxide of iron, the lead is perfectly protected from scorification by the highly-charged iron slag which is formed.

It often happens that the matts retains much lead; it is in order to free them from this metal that they form a portion of the charge of a subsequent fusion. After having been re-fused, these matts are roasted in a most complete manner, and then fused anew with fresh copper ores. This operation is exceedingly ingenious—for, in the presence of an excess of copper, copper regulus alone is formed, and the lead obtained is freer from sulphur.

Fusion for Black Copper.—The copper regulus is reduced to small fragments and roasted; in this roasting, a layer of wood is placed in the furnace, which is covered with a layer of regulus—in weight, about two and a half tons. The roasted regulus is then fused, and black copper obtained. The products are—1st. Argentiferous black copper, which is treated by the process known under the name of *liquation*, which will be hereafter described, with all the necessary details.—2d. Copper regulus, which is re-roasted, and, when re-fused, furnishes other matts, and black copper.—3d. Scoriaceous matts, or slags, which undergo the usual operations of picking, &c.

Treatment of Silver-Lead by Cupellation.—In the separationof silver from alloys of lead and silver, the process termed cupellation is had recourse to. In this operation, the whole of the lead present is converted into oxide, which forms the litharge of commerce, and is either sold as such, or reduced to the metallic state, by an operation already described in our paper, on the treatment of lead ores, and metallic silver, which is disposed of in the ordinary way:—In order to produce the above result, it is sufficient to heat the alloy to redness, and to expose it whilst in that state to the action of a current of air. The litharge, which soon begins to form, being lighter than the alloy from which it was produced, rises to the surface, and is run from thence into the floor of the cupel-house. In course of time, the silver becomes concentrated in the metallic residue; and, in proportion as its richness increases, so must the heat employed be augmented, until at last the fire is considerably increased, and the silver remains as pure as it can be furnished by this operation. The process of cupellation is carried on in a reverberatory furnace—the hearth of which is replaced by a cupel of very considerable dimensions. The cupels employed are sometimes made with bone-ash, sometimes with marl. These cupels are generally circular. In England, however, they have an oval form. Lastly, one cupel has only one charge of lead—that is to say, it has only as much placed in it as it can conveniently hold, and, when that charge is worked off, the cupel is useless. The litharge is run off by a small channel in the side of the cupel, which is deepened in proportion as the lead is oxidised. In some mills, however, the above process is not adhered to—for, in proportion as the lead in the cupel disappears by oxidation, new doses of lead are added. By these means, more silver is obtained, as the result of the destruction of one cupel. It will be readily seen, that the above operation is applicable to all argentiferous leads, no matter whatever their origin, so that by cupellation they are treated:—1. Silver-lead produced by the smelting of silver-lead ores.—2. Silver-lead from the smelting of silver ores; these are generally very much richer than the first-class.—3. Silver-lead produced during liquidation; an operation to be hereafter described.—4. Silver-lead obtained from the sweepings of silversmiths' shops, and products analogous to cupel bottoms, &c.—5, and lastly. Silver-lead produced by any other manner than above described, can be submitted to cupellation.

We shall now principally direct our readers' attention to the treatment of silver-leads produced in the working of silver-lead ores, for the phenomena they present are so complicated, as to involve very nearly all those observable in the other classes. We have already remarked the differences existing between silver-lead of the first running, or commencement of the smelting, to the silver-lead produced towards the end of the operation. This fact was known to the most ancient metallurgists. M. Fournet has shown the exact nature of this difference, by submitting to assay the silver-lead produced at different epochs of the same charge. The following are the quantities of silver furnished by 10,000 parts of the lead produced as above:—1st tap, 0·0055; 2d tap, 0·0043; 3d tap, 0·0040; 4th tap, 0·0038; lead from slags, 0·0011. The slags were treated on the "slag hearth." It is, therefore, evident, that the greater part of the sulphuret of silver has a tendency to separate with the first production of lead. As silver is capable of forming fixed and stable compounds, it has been supposed that its passage into the state of sulphuret, or oxi-sulphuret, is attributable to the resistance which is opposed to its immediate reduction. M. Fournet supposes, that it is an oxi-sulphuret which is first produced but this supposition has not been proved; neither can this point be cleared, excepting by analyses of all the products of a silver-lead mill, or, at least, analyses of mixtures of a known value. The quantity of silver necessary to be present in silver-lead, so that it may be profitably worked, varies within certain determinate limits, fixed by the price of coal, labour, and lead. When the two first are dear, and the latter low, richer silver-lead will be required to cover the costs of extraction. When lead is dear, and labour and fuel cheap, many substances can be profitably treated, which otherwise would be useless. [In our next week's Journal the process of cupellation will be described at length.]

BLAENGWAWR STEAM COAL, CARDIFF.—ORDERS for the BLAENGWAWR STEAM COAL RECEIVED by Mr. W. F. STANTON, 9, Love-lane, Eastcheap; or by Mr. George Sully, agent, 1, Bute-street, Cardiff, Glamorganshire, South Wales. 51

SWANSEA IRON SHIPBUILDING COMPANY.
BUILDERS OF IRON SHIPS, STEAMERS, BARGES, &c.
MANUFACTURERS OF
BOILERS FOR LAND, MARINE, AND LOCOMOTIVE ENGINES, TANKS FOR SHIPPING, GASOMETERS, ROOFS, &c.,
SWANSEA. 52

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY 53
BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th; and from Suez on or about the 10th of every month.
For rates of passage-money, plans of the steamers, and to secure passages, apply at the company's offices, 51, St. Mary Axe, London.

BRISTOL AND EXETER RAILWAY.—At the Half-yearly General Meeting of this company, held at the White Lion Hotel, in the city of Bristol, on Thursday, the 2d of March, 1848,

JAMES WENTWORTH BULLER, Esq., in the chair,

It was unanimously resolved,— 54

1. That the corporate seal of this company be affixed to the registers of shares and third shares, now produced.
2. That the report of the directors, now read, be received and adopted, and that they be requested to send a copy to every registered proprietor.
3. That Lord Courtenay, Mr. William Watson, Mr. William Browne, and Mr. John Stone, be re-elected directors of this company.
4. That Mr. Thomas Saccombe be re-elected an auditor of this company.
5. That a dividend of £1 13s. 9d. per £100 share, free of income tax, be declared for the half-year ending on the 31st of Dec. last, payable to the proprietors who stood registered at the closing of the transfer books, on the 21st of February.
6. That the directors be, and they are, empowered to raise or re-borrow such sum or sums of money on mortgage or otherwise, in lieu of loans paid off, or from time to time to be hereafter paid off, by this company, and to issue new debentures, or other securities, for the sums so raised or re-borrowed, and subject to such terms and conditions as the directors may determine.
7. That this meeting fully approve and adopt the recommendation of the directors to prepare the necessary plant for working the line independently, at the expiration of the present lease.
8. That the best thanks of this meeting be given to the directors, for their able and efficient management of the affairs of this company. JAMES W. BULLER, Chairman.

The chairman having quitted the chair, it was resolved by acclamation,—

9. That the best thanks of this meeting be given to James Wentworth Buller, Esq., for his able and judicious conduct in the chair.

CALEDONIAN RAILWAY.—At the HALF-YEARLY GENERAL MEETING of the Caledonian Railway Company, HELD in the Roya Hotel, Edinburgh, on Friday, the 25th of February, 1848,

J. J. HOPE JOHNSTONE, of Annandale, Esq., chairman of the company, in the chair,

The advertisement calling the meeting having been read, the following resolutions were passed unanimously:— 55

1. That the common seal of the company be affixed to the register of shareholders (which was accordingly done in the presence of the meeting).
2. That the report of the directors now read be received, adopted, and circulated among the shareholders.

And at a Special General Meeting of the shareholders of the company, held in like manner, same place and day, immediately after the business of the Ordinary Half-Yearly Meeting had been transacted (J. J. Hope Johnstone, Esq., in the chair), it was resolved unanimously,

1. That this meeting sanctions and approves of the bill introduced into Parliament in the present session, to enable the Scottish Central Railway Company to lease their undertaking to the Caledonian, Lancaster and Carlisle, and London and North-Western Railway Companies.
2. That this meeting sanctions and approves of the bill introduced into Parliament in the present session, to effectuate the sale of the Wishaw and Coltness Railway to the Caledonian Railway Company.
3. That this meeting sanctions and approves of the bill introduced into Parliament in the present session, to enable the Caledonian Railway Company to improve the Glasgow, Garnkirk, and Coatbridge, the Clydesdale Junction, and the Wishaw and Coltness Railway, and to make branch railways connecting the two last-named lines.
4. That this meeting sanctions and approves of the bill introduced into Parliament in the present session, to enable the Caledonian Railway Company to extend their railway across the River Clyde, at Glasgow, and to form a station in that city.
5. That the directors be authorised to borrow the following sums, under the powers contained in the following Acts—viz.:

1. Under the Caledonian Railway (Glasgow, Garnkirk, and Coatbridge Branch) Act, 1846, the sum of	£16,600
2. Under the Caledonian Railway (Carlisle Deviation) Act, 1846, the sum of	25,000
3. Under the Caledonian Railway (Glasgow Termini and Branches) Act, 1846, the sum of	133,300
4. Under the Caledonian Railway (Clydesdale Junction Railway Deviations) Act, 1846, the sum of	5,300
In all amounting to the sum of	£180,200

J. J. H. JOHNSTONE, Chairman.

The chairman having left the chair,—

It was resolved unanimously,—That the cordial thanks of the meeting be given to the chairman for his conduct in the chair. J. W. CODDINGTON, Secretary.

CALEDONIAN RAILWAY COMPANY.—Notice is hereby given, that the directors of the Caledonian Railway have made a CALL of FIVE POUNDS per share on the £25 shares of the company, payable in two equal instalments—viz.: £2 10s. on the 31st March next, and £2 10s. on the 1st July next. 56

No transfer of shares lodged at this office after this date will be registered until the whole call be paid. By order, J. W. CODDINGTON, Secretary.

Caledonian Railway Company's offices, 122, Princes-street, Edinburgh, Feb. 28, 1848.

CALEDONIAN RAILWAY.—This important RAILWAY was OPENED THROUGHOUT FOR TRAFFIC on the 15th ult., between CARLISLE, GLASGOW, EDINBURGH, and all places in connection with the London and North-Western and Lancaster and Carlisle Railways. Mail Trains now run twice each way daily between London, Edinburgh, and Glasgow, without change of carriages. 57

CALEDONIAN RAILWAY COMPANY—LOANS ON DEBENTURES.—TENDERS OF LOANS ON DEBENTURE BONDS are now RECEIVED in sums of not less than £500, for any number of years not exceeding five. Interest to be at the rate of 5 per cent. per annum, payable half-yearly, in London, Edinburgh, Glasgow, or in any country bank.

Tenders to be addressed to this office, giving full name and address of lender. 58

D. RANKINE, Treasurer.

Caledonian Railway Office, Edinburgh, Feb. 25, 1848.

JOWETT'S PATENT HYDRAULIC TELEGRAPH.
OFFICES—No. 17, WELLINGTON-STREET, STRAND.
(Adjoining the *Morning Post* and *Court Journal*.)
PRELIMINARY ANNOUNCEMENT. 59

In the present important age of mechanical invention and advancement in the various branches of science, probably one of the most prominent production of fertile genius is that of instantaneous correspondence by telegraphic means upon railroads, no matter how far distant the transit. Telegraphic communication by electric machinery has already exhibited, upon numerous lines of locomotive traffic, the great advantages derived by the public through the medium of its powerful agency. But, successful as the telegraph mode of correspondence by electric aid may be considered, still greater and far more effective results will be secured to the public by Jowett's Patent Hydraulic Telegraph. The patentee, in the present limited detail, merely claims public attention to the following items in the way of superiority over the electric telegraph:—1. The economy in the construction of the hydraulic telegraph will be, at least, a saving of two-thirds, compared with the outlay required by the electric, independently of the considerable increase of speed, and the results far more decisive and distinct.—2. No expense whatever (after the first amount for construction) will be necessary to provide for the continuous working of the hydraulic telegraph, it being beyond the possibility of doubt that its action can be deranged, nor can any atmospheric changes interfere with, or affect, the success of its operations.—3. No physical impediment can compete with the laying down and the perpetual use of the hydraulic telegraph—neither height, depth, sinuosity, nor distance opposing in the slightest degree in perfect action. Detailed printed particulars are in preparation. In the meantime the patentee may be seen daily, from Eleven to Three, at the offices, 17, Wellington-street, Strand, where the models and plans are open to the inspection of the public.

OFFICE FOR SANITARY IMPROVEMENTS.
REID & CO., 3, NEWMAN'S-COURT, CORNHILL.
DRAINAGE REPAIRED, IMPROVED, or RE-CONSTRUCTED on a superior principle. Offensive Water Closets Cured, Smoky Rooms Prevented, and all Defective Ventilation Restored, on the systems recommended by Mr. Jukes. 60
Office hours from Ten till Four daily.

Just published, Part I.,
COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates. 61
By CHARLES WYE WILLIAMS, Esq.
London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 62
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery Pamphlets containing a description and directions for its use is. each, but to customers gratis

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.
W. BROTHERTON AND CO.'S
PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY. 63

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

CALDWALL'S PATENT SELF-FLEETING WINDLASS, CAPSTAN, AND RIDING BITS COMPANY.
OFFICES—No. 73, *KING WILLIAM-STREET, LONDON.* 64

The patronage of the Lords of the Admiralty and the Hon. Trinity Board, together with testimonials of several of the most practical, scientific, and influential nautical men in the kingdom, having guaranteed the importance to the maritime world of the above-mentioned invention, it is now proposed to carry out the manufacture of the several patented articles—WINDLASSES, CAPSTANS, RIDING BITS, &c., by means of a capital of £100,000, to be raised in 5000 shares, of £20 each, and to be conducted by a company, to be formed for the purpose.

The above inventions, in addition to their superiority over the old windlass, capstan, &c., have the recommendation of greater economy, as they can be supplied at a less price—calling a very handsome profit, and, consequently, a large return to shareholders.

Models may be seen in operation—prospectuses obtained, and every information given, by application at the office, 73, King William-street, City, from Eleven till Four daily, and orders are received there and at the manufactory, Bell Wharf, Shadwell.

LONDON AND PROVINCIAL DETECTIVE ASSOCIATION, FOR THE PROTECTION OF TRADE.
No. 39, *SOUTHAMPTON-BUILDINGS, HOLBORN, LONDON.* 65
OFFICE HOURS: TEN TO FOUR.

The object of this institution is to furnish every information (which may be obtained by subscribers only) respecting all parties, in any capacity whatever, avoiding their creditors, under any circumstances; also, in providing every species of information calculated to protect Bankers, Merchants, Tradesmen, Companies, Institutions, Assurance Offices, Loan Societies, Auctioneers, Landlords, Tenants, &c., in such a manner hitherto unattempted by any kindred society.

Subscribers may be preserved from losses through fraud of all kinds, by previous application at this office. They are also requested to make every communication in their power that may tend to protect the members, which will be considered strictly private, and, at the same time, deemed a favour.

Persons wishing to become members of this association, must apply, by letter only, addressed (pre-paid) to the secretary, who will forward the rules.

Subscribers only are eligible to apply for any information—the terms of which are £1 1s. per annum—10s. 6d. in advance. H. E. NEWMAN, Secretary.

NATIONAL DISINFECTED AND DRY MANURE COMPANY.
OFFICES—No. 7, *BANK CHAMBERS, LOTHBURY.*
[REGISTERED PROVISIONALLY.]

Capital £200,000, in 20,000 shares, of £10 each.—Deposit £1 per share.

No call will exceed 5s. per share, and the liability of shareholders will be limited to the amount of their respective shares.

PROVISIONAL COMMITTEE. 66
GERARD BARRY, M.D., Charles-street, St. James's-square.
JAMES ORGILL, Esq., Birmingham.
THOMAS BALDWIN, Esq., Birmingham.
JOSHUA E. COOPER, Esq., West Ham, Sussex.

BANKERS—Messrs. Spooner, Atwoods, and Co.

The object of this company is to collect the animal and vegetable refuse of large and populous towns, and subsequently to convert them into a dry, inodorous, and portable manure.

By the company's process all decomposed substances, whether animal or vegetable, liquid or otherwise, may be rapidly converted into a scentless manure—rich in every fertilising quality, and abounding in vegetable stimulant.

A manure, somewhat similar, has for some time been manufactured by a prosperous company in Paris, under the commercial firm of "Baronnet and Co." Their last report states, that "crops were obtained incomparably finer, and more abundant, than by the use of any other manure.

The cost of preparation is trivial, in comparison with any of the present methods of dressing. The committee, therefore, have no hesitation in affirming, that the profits will realise the most sanguine expectations of shareholders.

The primary operations of the company will commence in the town of Birmingham.

Samples of the manure may be seen at the offices.

An influential list of patrons and directors will shortly be advertised; meanwhile applications for shares, agencies, &c., may be addressed to

JAMES H. KENWORTHY, Secretary pro tem.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.* 67
Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

A CURE of FIFTY YEARS' ASTHMATIC COUGH in a Lady of the age of 66.—Dr. LOCOCK'S PULMONIC WAFERS.—From Mr. Wm. Tomlinson, bookseller, 15, Stodman-street, Newark, Jan. 14, 1848.—"A lady of this town (whom I can refer any one to privately), who is now in the 66th year of her age, has been afflicted with a most violent asthmatic cough ever since she was 15 years old. For many years she has been constantly under medical attendance, and all means tried in vain to remove her complaint. About two months ago she was induced (though at that time apparently upon the brink of the grave) to try the above medicine, which, through the Divine blessing, has not only removed her cough, but her lungs appear quite regenerated—her appetite, &c., has returned, and her health is wonderfully improved.—WM. TOMLINSON."—Dr. Locock's Wafers give instant relief, and a rapid cure of asthma, coughs, and all disorders of the breath and lungs.—Price 1s. 1½d., 2s. 9d., and 11s. per box.—Agents: Da Silva and Co., 1, Bride-lane, Fleet-street, London; and sold by all medicine vendors. 68

ON NERVOUS DEBILITY AND GENERATIVE DISEASES.

Just published, the thirty-fifth thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, by the Authors, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, &c.

MANHOOD: the CAUSES of its PREMATURE DECLINE, with plain directions for its perfect restoration. A Medical Essay on those diseases of the Generative Organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in youth, manhood, and old age; with practical remarks on marriage, the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.—By J. L. CURTIS & CO., consulting surgeons, 7, Frith-street, Soho-sq., London. 69

REVIEWS OF THE WORK.

We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun*, Evening Paper.

Curtis, *On Manhood.* (Strange).—Having for many years been the standard work on these diseases, its originality is apparent, and its perusal breathes consolation and hope to the mind of the patient.—*Naval and Military Gazette.*

Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*

Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool; Robinson, 11, Greenside-street, Edinburgh; Berry and Co., Capel-street, Dublin; and, in a sealed envelope, by all booksellers.

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*** It will at all times save much delay and inconvenience, if communications are directed simply To THE EDITOR, *Mining Journal Office*, 26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.